Todd Bates

Duns Scotus and the Problem of Universals

Continuum Studies in Philosophy

continuum

Duns Scotus and the Problem of Universals

Continuum Studies in Philosophy
Series Editor: James Fieser, University of Tennessee at Martin, USA

Continuum Studies in Philosophy is a major monograph series from Continuum. The series features first-class scholarly research monographs across the whole field of philosophy. Each work makes a major contribution to the field of philosophical research.

Aesthetic in Kant, James Kirwan
Analytic Philosophy: The History of an Illusion, Aaron Preston
Aquinas and the Ship of Theseus, Christopher Brown
Augustine and Roman Virtue, Brian Harding
The Challenge of Relativism, Patrick Phillips
Demands of Taste in Kant's Aesthetics, Brent Kalar
Descartes and the Metaphysics of Human Nature, Justin Skirry
Descartes' Theory of Ideas, David Clemenson
Dialectic of Romanticism, Peter Murphy and David Roberts
Hegel's Philosophy of Language, Jim Vernon
Hegel's Philosophy of Right, David James
Hegel's Theory of Recognition, Sybol S.C. Anderson
The History of Intentionality, Ryan Hickerson
Kierkegaard, Metaphysics and Political Theory, Alison Assiter
Kierkegaard's Analysis of Radical Evil, David A. Roberts
Leibniz Re-interpreted, Lloyd Strickland
Metaphysics and the End of Philosophy, HO Mounce
Nietzsche and the Greeks, Dale Wilkerson
Origins of Analytic Philosophy, Delbert Reed
Philosophy of Miracles, David Corner
Platonism, Music and the Listener's Share, Christopher Norris
Popper's Theory of Science, Carlos Garcia
Role of God in Spinoza's Metaphysics, Sherry Deveaux
Rousseau and the Ethics of Virtue, James Delaney
Rousseau's Theory of Freedom, Matthew Simpson
Spinoza and the Stoics, Firmin DeBrabander
Spinoza's Radical Cartesian Mind, Tammy Nyden-Bullock
St. Augustine and the Theory of Just War, John Mark Mattox
St. Augustine of Hippo, R.W. Dyson
Thomas Aquinas & John Duns Scotus, Alex Hall
Tolerance and the Ethical Life, Andrew Fiala

Duns Scotus and the Problem of Universals

Todd Bates

continuum

Continuum International Publishing Group
The Tower Building
11 York Road
London SE1 7NX

80 Maiden Lane
Suite 704, New York
NY 10038

www.continuumbooks.com

© Todd Bates 2010

All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or any information storage or retrieval system, without prior permission in writing from the publishers.

British Library Cataloguing-in-Publication Data
A catalogue record for this book is available from the British Library.

ISBN: HB: 978-1-8470-6224-6

Library of Congress Cataloging-in-Publication Data
Bates, Todd.
Duns Scotus and the problem of universals / Todd Bates.
p. cm.
Includes bibliographical references and index.
ISBN-13: 978-1-84706-224-6 (HB)
ISBN-10: 1-84706-224-5 (HB)
1. Duns Scotus, John, ca. 1266-1308. 2. Universals (Philosophy) I. Title.

B765.D74B34 2010
111'.2092–dc22 2009028745

Typeset by Newgen Imaging Systems Pvt Ltd, Chennai, India
Printed and bound in Great Britain by CPI Antony Rowe Ltd,
Chippenham, Wiltshire

Postpone the anatomy of summer, as
The physical pine, the metaphysical pine.
Let's see the very thing and nothing else.
Let's see it with the hottest fire of sight.
Burn everything not part of it to ash.
Wallace Stevens, from *Credences of Summer*

To my wife, Susan, and my daughter, Anne-Marie.

Contents

Preface ix

1. Scotus *Recidivus*? 1
2. On the Structure of Material Substance in Scotus' Metaphysics 23
3. Substantial Natures: Neither Singular Nor Universal, but Common 57
4. On Individuation by the Haecceity 86
5. Responses to Objections 126

Notes 144
Bibliography 160
Index 165

Preface

This *opuscule* presents the research of my dissertation, updated in light of recent work since 2003 on Scotus, universals, and mereology. I have held to a core idea: one can resolve the problem of universals by combining a realism about universals with a mereology that pictures universals as proper parts of things, where the realism and mereological picture in play are Scotus'. Scotus' solution is one among many others, and while I take it to be correct, I do not attempt to clear the field of competing views, especially those of his near contemporaries Aquinas and Ockham.

Presenting Scotus' solution to the problem of universals requires work toward both the recovery and the application of his ideas. Most of what Scotus has written has not been translated into accessible English editions, and only recently has his Latin been published in edited form. There is still work being done to edit his manuscripts, and though the editing might not be completed in my lifetime, it seems to me that we have enough of his work before us to be confident about piecing together his thought about universals. I presume it is reasonable to consult the available, edited texts asking, for instance, whether he had a view on what we would recognize as the problem of universals, and if so, what that view was.

Unfortunately, it may be imprudent to expect Scotus to have simply one view on a given metaphysical question which we may go on to present as *the* view which he promulgates. Scotus *seems* to have changed his mind over time about such matters as the univocity of being and whether the existence of God can be proven. Thus, in the early *Most Subtle Questions on the Metaphysics,* in Book IV, he seems to hold that being is not univocal, while in his later *Ordinatio* commentary he holds it is, while in the late *Theoremata* he seems to take back an assumption he held earlier throughout his career, that the existence of God can be proven in metaphysics. Such apparent contradictions may be read as evidence of Scotus' thought developing and changing, so that one may speak of a chronology to Scotus' thought. I have not presented such a chronology here, and must warn the reader that I presume his thought on the problem of universals was constant. In particular, I look at Scotus' early logical commentaries, and see views that are compatible and fit together with both the later metaphysical views of Book VII of the *Most Subtle Questions on the Metaphysics* and his *Ordinatio*, and, say, the later *Reportata IA* and *Quodlibetal Questions.* However, my claim that Scotus for the most part had a single, consistent view about universals may prove to be contentious, and would seem to require a defense not offered here.

The research project whose lineaments are presented here will serve—I hope—as part of an even more ambitious project, one of providing an essentialism that could serve as a metaphysical foundation for a defensible, scotistic virtue ethics and theory of natural law compatible with Christian theism.

My thanks go out to Jim Ross and my wife, Susan Peppers-Bates, who had many helpful, critical suggestions for me as I pondered over Scotus' meaning, and to audiences in Florida, at UPENN, and elsewhere who heard and responded to various parts of this work. The library at Stetson University has been quite helpful in gathering much needed materials, and I am grateful to the staff at Continuum Press for their patience. With all of this help at my disposal, I must confess the faults that remain are products entirely my own.

Chapter 1

Scotus *Recidivus?*

Why would anyone be interested in the metaphysics of John Duns Scotus today? I fear Scotus has an undeserved reputation in some intellectual circles. For instance, J.P. Moreland writes that he "will not consider Scotus's notion [of haecceity] because I believe it is either unintelligible if left as a genuine alternative . . . or else it reduces to one of them (i.e. bare particularism)."[1] Goldstein seems to use guilt by association with Scotus to argue against David Armstrong's theory of universals, asking whether the theory makes real progress or just indulges in "scientific scotism."[2] It may look as if Scotus' metaphysics is a bit like Ptolemy's cosmology not only in being so forbiddingly complex that it is "unintelligible"—except perhaps to a few specialists—but also in being hardly worth all the effort since it is so obviously wrong-headed.

Any project—such as mine—taking a medieval metaphysics of forms and natures seriously—may indeed seem perversely wrong-headed. Hilary Putnam writes as follows:

> But, in a way, it should have been realized a long time ago that the talk of Powers in "modern philosophy" was problematical, for such talk is a hang-over from medieval philosophy, not something that belongs in its own right to the new picture.

And there is more:

> A world governed by a system of differential equations is one thing; a medieval (or an Aristotelian) world governed by Substantial Forms which manifest themselves as tendencies rather than as exceptionless laws is something else.[3]

That is, it is something else clearly *not* to be desired. A theory on which the world includes things with powers may look recidivistic, portraying things as if they were "full of threats and promises,"[4] items teeming with burbling *numina*. If philosophers can agree on anything, can't they at least agree to put such a world view behind them once and for all? As indispensable to our survival and our understanding of the world as notions of forms and natural kinds might have been once,

> [i]n general we can take it as a very special mark of the maturity of a branch of science that it no longer needs an irreducible notion of similarity and kind. It is that final stage where the animal vestige is wholly absorbed into the theory.[5]

It is fair to say that a work on Scotus aspiring to relevance bears a special burden of proof, standing outside the mainstream of contemporary philosophical conviction. Why try to "turn back the clock" as it were? Why cling to the "animal vestige"?

Of course I do not share in this dismissal of substantial forms, or in the common notion (no pun intended) that to take forms and natures seriously is to regress to the confusions of a pre-scientific period. Rather I hold Scotus' metaphysics to be worthy of more than merely antiquarian interest; this monograph shall argue that there are some interesting things about which he may well be *right*. In particular, I argue his theory of common natures is a plausible candidate for answering various contemporary problems about universals. I am not calling for the re-introduction of some rococo ontology whose lolling entities do no work; Scotus wielded "Ockham's razor" before Ockham: *Numquam pluralitas est ponenda sine necessitate.*[6] The types of entities Scotus used in order to flesh out his theory of common natures, namely prime matter, the substantial form, the common nature, and the haecceity, are each needed to do work in answering the problem of universals. The fact that they are needed to do this work, and manage to do it at least as well as posits from competing theories, recommends them to us today.

I What is the Problem of Universals?

Just what work do Scotus' common natures perform with regard to the problem of universals? The problem of universals is not merely a single problem, but rather a collection of *conundra* concerned with explaining resemblances among objects in the world. In particular, we wish to know,

Are there universals or not?

And if the answer is "No" we wish to know how it is we get along without them. Thus, although we are concerned over whether universals exist, we may be led to consider other types of entities—sets, groups, relations, properties, et al. While considerations about how we use words or how our minds operate may influence the answer to the question about whether there are universals, Scotus' problem is not merely linguistic or psychological; it concerns the existence of universals; it is metaphysical.

The term *universal* is technical; let us provisionally take a universal in a rough and ready way to be an item that can exist in distinct things at the same time. Refinements of the notion will become necessary as we go on, but this provisional notion suffices for now. Suppose that a sunset and a rose viewed together early one evening are both red. If indeed the sunset and the rose share the very same color, a certain shade of red, then that shade of red is a universal. That shade exists—one and the same item—in the sunset and also in a distinct, disjoint object, the rose, at the same time.

The question of whether or not there are universals arises since "we cannot help noticing that there is a great deal of recurrence and repetition in it [by the world around us]."[7] Features as well as relations recur among different things, as when the same particular shade of color recurs in two garments, or two men become fathers. Moreover, we note features and relations may recur not just singly, but also in clusters that we sometimes designate with natural kind or sortal terms. For instance, we note the recurrence of a cluster of features and relations in the existence of different items each of which we designate with the natural kind term, "dog." These varieties of recurrence are a given in the world, data that we may seek to explain.

In the context of my argument here, the mere fact of recurrence itself is meant to be neutral with respect to the problem of universals; that is, on acknowledging resemblances, we are not simply implying the existence of universals. Both those who believe universals exist and those who do not may acknowledge there are resemblances among things before going on to argue whether that implies there are universals. Does an explanation of this monotony in the world require reference to universals? That is, might a recurring item—a feature like negative charge, for instance, be strictly identical in different things?

My rough explanation of *universal* is meant to distinguish universals from two other types of items. First, one should not confuse the sharing that characterizes a universal with the sharing of an entity like a coin or watch that can pass between different people at different times. That kind of sharing is not the mark of a universal because what is shared, the entity in question like the coin or watch, is not in more than one place at a time and is—so far as we can tell—incapable of occupying two or more disjoint places at once. A universal feature, like a particular shade of red, say, is supposed to be able to do just that. Second, one should not picture a universal to be one proper part of a wider whole, like a piece of pizza is a proper part of the whole pizza. The pieces of a pizza are not one and the same item in disjoint places, but different parts of the same whole in different places. Let us call the universal's characteristic feature of being capable of occupying two or more places at once a capacity for multiple location.

One fairly straightforward way of developing the problem of universals proceeds by posing a rather broad question,

(Q) *How do we explain resemblances between things*?

The resemblances referred to in (Q) constitute quite a diverse collection; they may be qualitative, as when we ask about a color or pitch, or quantitative, as when we ask about a weight, or may involve relations, as when we ask about equality, or may involve natural kinds or sortals, such as when we inquire whether humanity is a universal. Armstrong and Moreland[8] ask us to consider the words in this box:

THE THE

How many words are there? Counting tokens, we should answer "two," while counting types, we may answer "one". Each of the word tokens, being similar to the other, belongs to the same type.

But what is this type that the word tokens have in common in virtue of their similarity? If one takes the type with "ontological seriousness" and answers that it is an entity which each token instantiates or exemplifies, then the type is a universal. Thinking that there is some real entity that each token has in common, one takes a realist position. Let us take *realism* to be the position that universals exist.

On the other hand, one may hold that the type *the* is not an entity. Instead, one may say there are two word tokens in the box, this "the" and that "the," and that they resemble one another without having anything in common, like an instantiated type, that accounts for their similarity. Let us call this a *nominalist* position. What is at issue are the real similarities among things, and the need for an account of their resemblance—such an account is, as Armstrong claims, a "mandatory question."[9]

Again, let us look at an example having to do with color. Picture a colored, rectangular surface divided into four bands, as follows:[10]

A	B	C	D
a certain shade of red: scarlet	A certain shade of blue: indigo	a certain shade of red: vermilion	a certain shade of red: scarlet

The bands exhibit three varieties of resemblance. On the face of it, bands A and D are of the same color, scarlet. Those bands resemble one another in the sense that they share exactly the same color. This is one type of resemblance. Band A also resembles band C, not inasmuch as they share exactly the same color, but rather in the sense that they are colors of the same type, red. The color in virtue of which A resembles C does not actually appear in either A or C. Rather, *red* is a generic term with respect to scarlet and vermilion. They are specific types of colors that belong to the same color family, red. Finally, even though the indigo shade of B is not the same as any other shade in the bar, and is outside the genus red, that scarlet and vermilion share, still we would say scarlet and vermilion each resemble indigo in a way that neither does a certain pitch, say, like middle A. That is, vermilion, scarlet and indigo have in common their being colors. It is not as if mere color appears to us without being a definite shade of color. It is rather we notice a certain resemblance in things—like that between bands A and B—that goes beyond what strictly appears in the deliverances of the senses.

As the example above shows, one might mean a number of different things in acknowledging that there are resemblances. One might be acknowledging resemblance between qualities, or between relations, exact resemblance or inexact resemblance. With this example in mind, we may ask whether the same specific color, really does exist in A and in D, in which case that species would be a universal. And we may ask whether the general resemblances between A and C or A and B imply that there exists a universal *red* or a universal *color*. It will be my contention that Scotus is interested especially in what we would call *natural kinds* or what he would call the *species* and *genera* of natural substances like *human* and *animal*; for the moment we might picture Scotus as concerned with the question of whether resemblances between things—dogs, say—imply that there are natural kind universals.

How should we begin to address the problem of universals? What strategy should we adopt? One approach, familiar from suggestions by W.V. Quine and applied to the problem of universals notably by David Armstrong, Michael Devitt, and others, involves *semantic ascent*.[11] Semantic ascent is

> the shift from talk of miles to talk of "mile," it is what leads from the Material . . . mode into the formal mode, to invoke an old terminology of Carnap's. It is the shift from talking in certain terms to talking about them . . .[12]

Quine says it will be easier for philosophers disputing existence claims to agree about terms, inasmuch as we may display the logical structure of the claims in a canonical, logical notation. A correct formalization of disputed claims in the canonical notation may help clarify ontological commitments implied by the statement. Without a way to formalize disputed existence claims, the dispute may become self-defeating.

Quine gives an example of a self-defeating dispute enabled by the absence of formalization. Suppose Mr A and Mr B are arguing over the existence of angels; A says there are angels, while B denies their existence. If A says B "refuses to recognize certain entities",[13] B may protest that A's way of describing the dispute begs the question by implying there are such things as angels. But then when B tries to describe their dispute, he cannot accurately do so by saying *There are items that A accepts and I do not*; nor does B wish to say the dispute is about nothing, i.e. that there is nothing that they are disagreeing about. B seems caught—and B's predicament can be generalized: "in any ontological dispute the proponent of the negative side suffers a disadvantage."[14] How to escape the predicament? Here is where semantic ascent comes into play: instead of talking about angels and asking straightaway whether they exist, talk about the term "angel" and whether there is an object to which it applies. B can then move from having to say the self-defeating *There are items that A accepts and I do not* to the neutral *A holds the extension of "angel" is occupied but I hold that it is empty.*

How would semantic ascent apply to the problem of universals? Suppose we are considering resemblances between things in the world, and notice that both the rose and the sunset are red. We wonder whether there really is something, a determinate shade of red, that the sunset and the rose have in common. Adopting Quine's strategy of semantic ascent, we should move from inquiring after things to inquiring about statements; in effect we should consider two statements, (1) "The rose is red" and (2) "The sunset is red." Let "F" stand for "red," "a" stand for this rose, and "b" stand for this sunset. Given the truth of "a is F" and "b is F," Armstrong asks "In virtue of what is a, or b, F?" He expects there is some relation, what he calls a truth-making relation, between true claims and the world that will explain their truth. *Prima facie*, the predicate "F" in "a is F" functions as a name referring to some entity, a universal property; it makes "ostensible reference to universals [sic]."[15]

Michael Loux also gives the problem of universals a semantic cast. In the true proposition "York is courageous" he portrays the realist as saying that "there must be a thing correlated with the proper name 'York'", but in addition the proposition "can be true only if 'courageous' is likewise correlated with some nonlinguistic object."[16] The fact that "courageous" can be synonymously applied to other individuals implies that the nonlinguistic object to which "courageous" is correlated is a universal, as it is present in each of the many individuals to which the predicate is applied.

However, as Quine and Devitt point out, the semantic cast to the problem of universals offers nominalists a way to resist the claims of realism. First, they may hold that "a is F" is true just in case there is an x, such that "a" refers to x and "F" applies to x. On this account, there need be no entity to which "F" refers to account for the truth of "a is F." In this semantics, "F" is just the name of a linguistic item, a predicate, not a property. This semantic account of the truth of "a is F" has no use for properties, whether universal or not, corresponding to predicates. Nothing in the canonical notation commits us to treating the predicate as if it named a property. A Quinean on this matter like Devitt may argue against Armstrong that as long as there is a semantic theory available that can dispense with the purported reference of predicates to properties in any particular case, there is no need to infer the existence of properties from the functioning of predicates in predication.

In other words, the nominalist can engage in paraphrasing away the purported reference to properties—universal or not—among suspect statements. As Devitt suggests,

> Suppose the given sentence *seems* to require for its truth the existence of *Gs* yet the person can offer another sentence, which serves his purposes well enough, and which is known not to have that requirement.[17]

Say sentence S commits us to the existence of entity x, but we come up with a paraphrase of S, S', which is equivalent to S but that has no commitment to x. Given S', we are not *committed* to the existence of x despite our affirmation of S. It seems then that realists such as Armstrong and Loux who counted on the predicate to function as a name for a universal presume more than necessary for the functioning of our canonical logic in formalizing existence claims.

Indeed, in my opinion semantic reasons for believing in universals can ever only be *prima facie* and inconclusive. Any general principle calling for an inference to universals from the use of predicates is invalid.[18] Loux is cautious as well in presenting the realist's case for universals. He recognizes that predicates cannot in general function as names on pain of absurdity—for example, consider the predicate "does not exemplify itself." The predicate in question is perfectly meaningful, but no property could possibly correspond to it.

Semantic ascent is a false friend for the realist; but it is a false friend as well for the nominalist. The paraphrasing strategy Quine and Devitt recommend has dim prospects. First, as Alston (1958) points out, given that S and S' are equivalent, "why should we think it is S rather than S' that deceives us?"[19] We could just as well say that S' commits us to x because S commits us to x. Indeed, why not give the following rather more platonic semantic reading for "a is F"[20]: "a is F" is true if there is an X such that "is F" designates X and "a" falls under X.

Far-fetched, perhaps, but why would it be wrong, exactly? Moreover, there are well-known examples of statements whose predicates *prima facie* refer to universals but that have resisted paraphrase, such as

Humility is a virtue;[21]
Grueness does not make for resemblance among all its instances.[22]

Notice the form that the debate may take while following the strategy of semantic ascent: a realist offering a statement that appears to resist paraphrase, and nominalists giving paraphrases. But even if nominalists do not offer a paraphrase, that fact does not clinch the realist's case, since for all the realist knows, it may just be that the nominalists are insufficiently clever. On the other hand, even if the realists do not offer a statement that manages to resist paraphrase, it does not clinch the nominalist's case for a similar reason. I conclude the debate on terms of semantic ascent is ill-conceived, serving the interests of neither party.

Is there an alternative strategy? Let us make a *semantic descent* and stop settling—if at all practical—for talk about statements in preference to talk about things, "miles" in preference to miles. What can we say about things instead? Let us address the problem of universals not by making it primarily a problem about statements, but rather taking it as a problem about things, and in particular a problem related to *causation.* Armstrong draws attention to this way of addressing the problem of universals as well:

> I believe that the explanatory power of a theory which gives real existence Properties . . . is seen most clearly in connection with *causation* and *natural law.*[23]

Properties are required to account for the facts of causation; likewise Mellor attests "I take the main reasons for believing in contingent universals to be the roles they play in causation . . .."[24] Suppose a gas flame is heating a kettle of water for tea. According to Armstrong, the flame heats the water, and the predicate "heats the water" applies to "flame" only because of something about the flame, the water, and the laws of nature. To generalize a bit, something about the actual *things,* the water and the flame, must be taken into account in explaining why it is true that the flame heats the water, namely, the *properties* of the actual things, the water and the flame.

In the late thirteenth and early fourteenth centuries, considerations around causation led Scotus to posit not universal properties, but what he called *common natures.* When a man and a woman united in conjugal ecstasy beget something, they do not beget a kitten or a paramecium; much less do they beget a twig, or a supernova, at least literally speaking. The point may seem too obvious to belabor: they beget a human. Even if something should go terribly awry in the act of begetting, still it will not go awry in such a way as to yield, say, a Broadway musical. I am calling attention to a phenomenon Scotus calls *univocal generation.* Univocal generation is a causal relation between *things,* not a relation holding between *words* or linguistic entities.

More formally, for any two things, x and y, and any natural kind term "F", x univocally generates y just in case these conditions are jointly satisfied:

1. x is F,
2. y is F,
3. "F" is used univocally in (1) and (2), and
4. x generates y.

For instance, consider Philip of Macedon and his son, Alexander the Great. We may truly say *Philip is human* and *Alexander is human.* Moreover, we would be using the term "human" univocally in those claims. Finally, Philip generates Alexander. By the schema above, we may infer the generation of Alexander by Philip was a case of *univocal generation.*

Aristotle recognizes univocal generation, and uses it as a sufficient condition for x and y each being natural; for instance, he writes "men come from men, but beds do not come from beds,"[25] and on account of this fact men, but not beds, are natural.

Scotus uses the fact of univocal generation both to infer the existence of natures, and to imply that they are common. Considering a series of things in which each member is begotten by its immediate predecessor, he writes, "an infinite succession of such causes is impossible unless it exists in virtue of some nature of infinite duration on which the whole succession and every part thereof depends."[26] He makes this comment in the course of arguing for the existence of God, and repeats similar comments in the late *De Primo Principio* and *Reportata Parisiensis* versions of his argument for God's existence.[27] I infer that he took univocal generation to be such an obvious fact that it could be used as a premise, the type of fact which even an opponent of his theistic arguments might admit.

Arguing such natures are not particular or individual, he writes:

> Moreover, even if no intellect existed, fire would still generate fire and destroy water. [1] *And there would be some real unity of form between generator and generated,* according to which unity univocal generation would occur. For the intellect that considers a case of generation [2] *does not make the generation be univocal, but recognizes it to be univocal.*[28]

The point made by [2] is that univocal generation is not merely a matter of our projecting our interests or cognitive habits of classification onto the world. Even if no (created) intellect had ever existed, univocal generation would still occur. The fact [1] alludes to would still hold, namely that the generator and the thing generated *share something in common,* that is, they have a "real unity of form." This form, Scotus contends, is the common nature.

But we must be careful to distinguish two ways of inferring the existence of universals from the fact of causation. In the case of Armstrong and Mellor, as well as many other contemporaries, laws of nature are required to explain causation, and we must quantify over universals in our laws. This is not Scotus' route. Rather, Scotus explains causation by appealing to what we would call, as we shall see in a later chapter, *real dispositions.*[29] Among these irreducible real dispositions for Scotus are substantial forms and common natures. In rough outline, I have claimed that Scotus attempts to answer (Q), *How do we explain resemblances between things?*, for a narrow range of resemblances, namely those implicated in our use of natural kind terms like "human" and "horse." In particular, Scotus will argue as follows:

MA (Main Argument)

1. If things resemble each other in terms of natural kinds, there are common natures;
2. Things resemble each other in terms of natural kinds; Thus,
3. There are common natures.

The controversial premise "cutting the philosophical ice" in (AI) is (1); (2) is meant to be innocuous, something a nominalist could concede without committing herself to universals. For all we know, the natural kinds referred to in (2) could be natural classes, or merely human concepts, rather than universals or common natures. Why can't there be resemblance in terms of natural kinds without there being common natures? What is the purported connection? We have already seen that for Scotus the answer will have to do with causation—and in particular the type of causation involved in reproduction among members of natural kinds. But before we delve into his full account of common natures, some further ground-clearing should be done.

II Event and Constituent Ontology

Many contemporary metaphysicians pose the problem of universals from within a metaphysical framework foreign to Scotus, a framework of events or states of affairs. For instance, Armstrong claims "There are those who . . . think of the reality as made up of *things*. There are others who, like me, think of it as made up of *facts* or *states of affairs*."[30]

There is no received consensus as to exactly what an event or state of affairs *is*. I take Kim's account to be standard, according to which an event is just a property exemplification at a time.[31] We could give an account of an event's identity conditions in terms of an ordered triple with a property, an object, and a time as members. On Kim's account, an event must have a temporal location, but need not have a spatial location. Other accounts are similar; D. Lewis adds that the event must occur in space-time.[32]

When metaphysicians seek to give an account of causation from within an event framework, they generally see themselves as giving an account of a relation holding between events. Thus, Davidson writes as follows:

> Much of what philosophers have said of causes and causal relations is intelligible only on the assumption (often enough explicit) that causes are individual events and causal relations hold between events.[33]

Shoemaker asserts that

> It is events, rather than objects or properties, that are usually taken by philosophers to be the terms of the causal relation.[34]

Lewis writes as follows:

> I shall confine myself to causation among events, in the everyday sense of the word: flashes, battles, conversations . . .[35]

And finally, Mellor says

> I think that what the causation in such cases primarily links are facts, not particulars.[36]

The point of this tiresome list? These philosophers do not have one notion of "event" or "state of affairs" in common; they take an event framework in common while disagreeing over exactly what events are. Still, the list suggests that the event framework is the received framework for answering metaphysical questions, including the problem of universals. For instance, from within the event framework, the problem of universals is about the property exemplified in an event: is it universal, or particular?

I am addressing the problem of universals from within the framework of Scotus' metaphysics, outside this framework of event ontology. Where is the root of the disagreement? For an event ontologist, for the most part, an object that has a property is said to exemplify or instantiate a property, whether it be universal or particular. Suppose that *being negative* is a property and an electron is an object. By saying "The electron is negative," one may indicate the property that the electron instantiates. An object's essence, in an event ontology, would consist of a group of properties that the object instantiates or exemplifies, where the properties in that group satisfy various other conditions: they each necessarily belong to the object, they do not necessarily belong to every object, and so on. A better picture: the essence is a *constituent* of the substance.[37] I agree with Witt, who says "an essence is not a property (or a cluster of properties) of the substance whose essence it is" and "it is also a mistake to think of the essence or form as a property of the matter."[38] However, this scholar do not go far enough. She says nothing about a *constituent* ontology, and in addition, identifies essence with substantial form, whereas Scotus separates them. Scotus conceives substances as *mereological wholes* with proper parts, one of which is a form and another of which is the common nature. In Scotus' ontology a substance's essence is a proper part of the substance; the relation between the essence and the substance is not one of exemplification or instantiation.

Indeed, I contend that what Scotus calls a common nature is a constituent, namely a proper part, of a substantial form, and that the substantial form itself is a constituent, a proper part, of a material substance. A substantial form is not a mereological atom, something without parts. Nor is the substantial form the common nature; Scotus distinguishes them. Minding his distinction between substantial form and common nature, note well that he identifies the common nature with the essence. Thus, as many contemporary commentators on Aristotle identify the substantial form with the essence, Scotus'

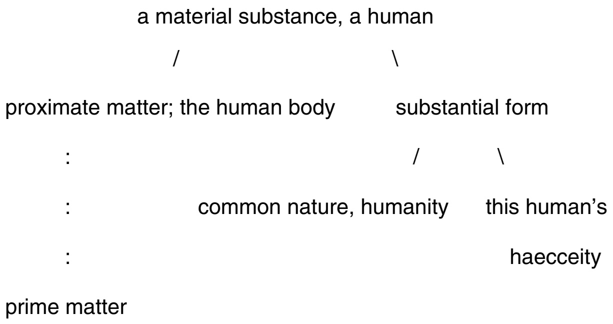


FIGURE 1.1 The structure of material substance for Scotus

distinction between substantial form and nature/essence places his account outside mainstream Aristotelian accounts of the structure of material substance.

Jumping ahead of ourselves a bit, let us lay out a more complete view of Scotus' account of a material substance's structure:

Each dark line indicates a proper part–whole relation, where what is on top is the whole. The dotted line between proximate and prime matter indicates that prime matter is a proper part of proximate matter only by the transitivity of the "part of" relation; I explain this in a brief and preliminary way below. This picture is over-simplified. The only mereological atoms that appear on it are prime matter and the haecceity; neither can have any proper parts. Both the common nature and the proximate matter are complex wholes with proper parts, but Figure 1.1 does not exactly represent the full complexity of material substance for Scotus. Prime matter is a proper part of the proximate matter, but not immediately. In a more regimented manner: prime matter is a proper part of something, x1, x1 is a proper part of something, x2, . . ., xn is a proper part of the proximate matter. Moreover, the "part of" relations represented by the solid lines express different proper part relations as if they were all the same. Proximate matter and substantial form are each parts of the material substance in a different sense from that in which the common nature and haecceity are parts of the substantial form. Despite these shortcomings, however, the diagram gives an accurate enough picture of the structure of a material substance for our purposes.

I speculate that Witt et al.'s point about essence not being a property is obscured by the fact, drawn out persuasively by Kung, that Aristotle predicates form of matter.[39] That is, we may make statements like "*These organs and bones are* human," where the predicate "human" refers to the form and "these organs and bones" refers not to the composite substance, but only the living body of the substance. This may have tempted some to read the relation between form and matter in Aristotle as analogous to that between concept and object in Frege. That is, they treat the proximate matter—the organs and bones in our example—as an object and the form as analogous to an unsaturated concept. Thus, Frank Lewis writes as follows:

> As Lukasiewicz suggested some time ago, Aristotelian form can be regarded as in some respects like a function from matter to a compound—in favored cases, to a compound which is also a substance. If we interpret functions in a Fregean style, similarities open up between Aristotle's views and those of Frege. For Aristotle, matter is itself a material object, but one that lacks the right kind of unity to count as a substance . . .. Form, meanwhile, is not itself a material object, just as for Frege a function is nonmaterial.[40]

Likewise, Wedin writes,

> Aristotle's idea is that form and matter must be linked in a way that does not invite asking, in turn, in virtue of what they are so connected. And this in turn is possible only if they have logically heterogeneous roles in the structure of a c[composite] substance . . .. Thus, much as Frege tried to explain the happy unity of a judgement in terms of the result of something that is unsaturated, a concept, being satisfied or completed by something of a different logical type, an object, so Aristotle appears to explain the . . . unit y of a c-substance[41]

Both Lewis and Wedin tend to downplay Aristotle's notions of act and potency as having little explanatory value, and instead see the analogy with Frege as illuminating. I have quoted these scholars at length because I see my interpretation of substance according to Scotus as contrasting especially with their "Fregean reading" of Aristotelian substance; they are the principal antagonists of my view. I reject their analogy between Frege and Aristotle as a potentially misleading anachronism; it may tempt the reader into accepting the wrong ontological framework, an event ontology, from which to interpret Aristotle and others in his tradition like Scotus.

There are cogent reasons for thinking event ontology is inconsistent with an Aristotelian metaphysics. Since events on most accounts include times, and causation is spelled out for the most part only in terms of a relation between events, event ontology seems to leave no room for the Aristotelian doctrine that time is just the measure of motion. Given that every motion has a cause, on event ontology, such an explanation of what time is would be circular. Moreover, event ontology is inconsistent with Scotus' theistic metaphysics, as event ontology rules out *a priori* the possibility of creation as a causal activity of God. For God as an agent does not create at a time. An event ontology seems to rule out an Aristotelian account of time and a theistic doctrine of creation without an argument. From Scotus' point of view at least, it is preferable not to build these results into an ontology and an account of causation from the start.

Here is a good place to stop and take stock of the differences between Scotus and other readers of Aristotle on the structure of material substance.

Many contemporary commentators (I am thinking especially of Wedin, Loux, and Lewis, but there are several others) on Aristotle see substantial form as the essential part correlative with proximate matter in a material substance, and they go on to distinguish the substantial form from the species essence, or what Scotus would call the *nature*. Broadly speaking, Scotus makes the same distinctions, so far. But then the commentators go on to make assertions with which Scotus would have to disagree: 1) they claim the substantial form is a universal in act, and 2) they do not make the essence a constituent entity of the substantial form. Even those who would agree with Scotus that the substantial form is particular deny that the essence is a real constituent of the substantial form with its own unity less than numerical unity (be that unity community or universality). I infer that Scotus' reading of Aristotle (against whose theory of forms and essences Scotus develops his own) is decidedly heterodox, at least among contemporary Aristotle scholars.[42]

"Weak proscription" (henceforth "WP") is Wedin's name for an interpretation of the conclusion of Aristotle's *idion* argument from *Meta.* VII.13. According to WP, the *idion* argument does not imply that nothing universal is substance, but rather that nothing *predicated universally* is substance. Thus, a weak proscriptionist takes Aristotle's *idion* argument as leaving open the possibility that *some* universal is substance. WP has been endorsed by Wedin, Loux, and Lewis; it attracts attention in part as a means of interpreting an *aporia* arising out of *Meta.* VII.13. Aristotle is committed to holding that:

1. Substantial form is substance.
2. Substantial form is a universal.

Then, in *Meta.*VII.13, it may seem that Aristotle argues:

3. No universal is substance.

Thus, *prima facie,* Aristotle is caught in a trilemma. WP helps untie the knot by affirming that it is possible that some universal is substance.

Scotus is committed to strong proscription (henceforth "SP"), according to which the *idion* argument of *Meta.* VII.13 implies not merely that nothing predicated universally can be substance, but also that nothing universal can be substance. Thus, in SP, (3) is affirmed, while in WP, (3) is denied. Thus, Scotus' interpretation of the *idion* argument conflicts with that of the weak proscriptionists: the conclusions are contradictory. Nevertheless, this conflict in interpretation in itself need not be of interest to us. Even if Scotus' interpretation of Aristotle in the *idion* argument is implausible, that alone is not a reason sufficient for rejecting Scotus' further argument based upon his own interpretation of *idion.* That is, advocates of WP might have a better interpretation of Aristotle's *idion* argument than Scotus has, and yet Scotus' overall argument might be better than that made by the advocates of WP.

I am not suggesting that we make the cogency of the argument made on Aristotle's behalf in an interpretation of the *idion* argument the standard sufficient to judge between conflicting interpretations. Rather, I wish to put aside the issue of who has the better interpretation of Aristotle. The interpretations of Scotus and of the weak proscriptionists each report an argument supposedly made by Aristotle. The conclusions of their arguments contradict. Since they are contradictory, given Aristotle's metaphysical picture, one of them must be right. Resolving the issue of which is the better reading goes beyond the scope of this book; I only wish to flag the issue here.

Scotus' Argument against Natures as Universals in Act

Scotus cites 1038b10–11 in the course of representing a certain opinion with which he partially disagrees, namely that substantial natures are individual of themselves. Of course, Scotus denies that substantial natures are individual of themselves. However, the opinion is partially right in denying that substantial natures are universal of themselves—Scotus agrees with them here. The opinion uses the *idion* argument to make that point, and I believe Scotus agrees that the *idion* argument is sound and implies that substantial natures are not universal of themselves. The problem with the opinion is the inference from (1), which Scotus holds, to (2), which he denies:

1. Substantial natures are not universal of themselves.
2. Substantial natures are particular of themselves.

The opinion makes that inference on the assumption, which we have already seen is false in Scotus' view, that

3. Substantial natures are either universal of themselves or particular of themselves.

According to what Scotus calls "Plato's fiction," "'this man' existing by himself is an Idea." That is, the Idea is a single item existing separately from other singulars and outside of the intellect. The Idea

Man exists separately, and yet it is universal to every individual man. Scotus writes that "substance" is ambiguous between "nature" and "first substance." If the Idea *man* is an individual's substance in the sense of being his nature, the Idea is the individual's essence. Being the individual's essence, the Idea is not a singular item. If it were, it would be different in each individual to whom it belonged. There would be one Idea *human* in Iulius, another different Idea in Pompey; in that case the Idea would not be universal, as it would not be one in many. Thus, the Idea, if it were the essence of the items to which it belonged, would be one and the same in each of the many items to which it belonged. Iulius and Pompey would each have the same Idea *man.*

Scotus claims that an Idea cannot be the substance of that to which it belongs, in the sense of being the thing's nature or essence, for the same reason that a complete universal in a singular cannot be the substance of that to which it belongs. The same argument applies to both, as whether the universal is separate or not is beside the point. The point is rather that nothing universal can be the substance of anything created. The Idea's being universal is the problem, not its being separate. As an immanent universal is just as universal as an Idea, its being immanent will not exclude it from the force of Scotus' criticism of Platonic Ideas.

He writes, "every substance existing by itself is proper to what it belongs to." "Proper" here is an extension of the use of "proprium." A proprium follows necessarily on a thing's essence, without being part of that essence, and is unique to the things to which that essence belongs; "essence" here is not considered to be singular. Scotus' use of "proper" for the substance of a thing cannot be synonymous with "proprium," as that would allow an item which is the substance of a thing to be proper to many of the same species, contrary to Scotus' intent. Rather, I think he means to use "proper" in an extended sense, so that a singular thing's substance belongs to it necessarily and is unique to it, but is not shared with anything else, whether of the same species or not.

A thing's substance may be either: (1) proper of itself; or (2) made proper by something contracting it. As for the first, a universal Idea cannot be proper in either sense. Since an Idea is universal, it is not proper of itself. As the Idea is universal of itself, it cannot be made proper to that to which it belongs. Thus, an Idea cannot be a thing's substance in the sense of being its nature.

The second alternative is more difficult to explain, because "substance" in the sense of thing's first substance is more obscure: how are we to distinguish a substance from its first substance? Are not these just the same item? In his *Quodlibetal Question Three,* Scotus writes that an essence "has the characteristic of primary substance, however, to the extent that it is just this being or singular"[43] For an essence to be primary substance is for it to be singular, or to be more precise: contracted. A contracted essence is just a singular substantial form. Here we are entertaining Ideas as essences. Thus, if the Idea were an individual's substance in the sense of its first substance, the Idea would be the individual's singular substantial form. In this case, one Idea would belong to Iulius, another to Pompey, and so on. Moreover, as they are each Ideas, each Idea exists separately from that to which it belongs. This is a bit obscure: does it mean that the Idea cannot be "present in" but must operate from outside the individual? Scotus does not explain, but he does not need to for the purpose of his argument.

Nevertheless, an Idea cannot be the substance of a thing in the sense of being its first substance. In order to be a thing's first substance, an Idea would have to be able to be its singular substantial form. But an Idea cannot be a singular substantial form, as it cannot be contracted. For an Idea is universal of itself. Therefore, an Idea cannot be the substance of a thing.

III Work for a Theory of Common Natures

Herein I advocate the cogency of Scotus' theory of common natures as an alternative among other theories answering questions raised by the problem of universals. Common natures cut philosophical ice: in particular they account for certain facts of resemblance among members of natural kinds. His argument for this will appeal especially to causation in univocal generation.

Surprisingly, Scotus' answer to the problem of universals—whether they exist—is "No"—they do not exist outside the intellect in the world or in things. Moreover, they do not account for causation, for example, univocal generation, or the resemblance among members of natural kinds. But his rejection of the reality of universals does not leave Scotus with nominalism.[44] That is, for him it is false that

> *Among entities, everything is either universal or else individual.*

Entities are not exhaustively divided into "universal" and "individual;" Scotus holds that there is a neglected alternative: entities may be neither universal, nor singular, but *common,* representing a *tertium via* avoiding problems that would follow on the nature itself being essentially universal or particular. A common nature is a real being, an entity *in* the things to which it belongs as a proper part. Scotus thinks that only by being *indifferent*—of itself neither universal nor particular, but potentially either—can it perform the disparate tasks allotted to it, namely being a causally active power in particulars, and a principle of human understanding, tasks which he argues neither a universal nor a particular could alone perform.

Having cleared the ground for Scotus' theory of common natures, I will say more about his constituent ontology in the next chapter, explaining how he understands material substances to be structured. The third chapter will recount and defend Scotus' argument for the existence of common natures. Once Scotus admits common natures as proper parts of material substances, he must answer a question about how material substances are individuated—what makes them numerically singular "thisses?" My fourth chapter will reconstruct Scotus' theory of individuation and in particular his argument for the haecceity or primitive thisness as a principle of individuation and how his use of haecceities requires Scotus appeal to a formal distinction between the common nature and haecceity. The notions of the haecceity and the formal distinction, forced on Scotus by his acceptance of common natures, are perhaps his most contentious metaphysical posits. In my fifth chapter I will contrast Scotus' haeccities with contemporary variants, and defend his version against critics.

Chapter 2

On the Structure of Material Substance in Scotus' Metaphysics

In this chapter, I outline Scotus' picture of material substance by arguing for the existence of certain of a material substance's proper parts, namely what he called prime matter and the substantial form. Other constituents of material substance will be treated later on: the common nature in Chapter 3 and the haecceity in Chapter 4. To begin, I shall argue that for Scotus,

(1) Prime matter is an entity.

My argument for (1) is, in summary, that Scotus' account of prime matter better resolves certain ongoing metaphysical puzzles than its most influential competitors. Aristotle and Scotus are pictured as what we would call *endurantists*, employing a substratum theory to explain substantial change in order to answer a contemporary metaphysical problem, namely David Lewis' puzzle of temporary intrinsics.

Next, I argue that according to Scotus,

(2) There are substantial forms,

as he argues they are needed to account for the unity of material substances and their causal operations. Finally, I give Scotus' case for holding

(3) Prime matter is really distinct from substantial form, in the sense of being separable from it.

That is, prime matter can exist on its own without any form, substantial or accidental. I deny that Aristotle holds either (1) or (3); Aristotle has good philosophical reasons, in my opinion, for holding that prime matter is the substratum of substantial change, but I see nothing in Aristotle hinting that he holds prime matter itself to be an entity. Much less does Aristotle hold that prime matter can exist on its own without any form whatsoever. Asserting (1) and (3), Scotus distances himself from Aristotle's theory of matter.

I An Introduction to the Concept of Prime Matter

I shall argue that a broadly Aristotelian substance ontology, with prime matter conceived along Scotus' lines, better explains the fact of the persistence of continuants through change and the loss of their parts than contemporary theories of four-dimensionalism. First, I explain four-dimensionalism, and present two standard arguments on its behalf. Next, I criticize these two arguments, using Aristotle's theory of substance, accommodated to Scotus' notion of prime matter. Finally, I argue for the explanatory superiority of a suitably emended substance theory to the in-vogue event ontologies.

IA On four dimensionalism: what is the theory?

Let us first get clear on some basic terminology.[1] "To persist" is a neutral term, applying to something just in case it exists at different times. It is neutral in the sense that using it does not commit one to a theory of just *how* it is that the thing exists at different times. I use "continuant" to talk about things that persist. A continuant endures just in case "it persists by being wholly present at more than one time."[2] An enduring continuant exists at two times, t1 and the later time t2, by being present at t1, and later being present at t2. It's not that part of the continuant is present at either time—rather, it is wholly and entirely present at each time. Probably, our ordinary view of continuants is that they endure. Shaking Obama's hand at t1, I take it for granted that Obama is in front of me, the whole Obama, and that there is no other part of him elsewhere that is not present when I shake hands with him. Thus, an opponent of endurance begins with a burden the partisan of endurance does not have, namely the burden of explaining why the ordinary view is mistaken. Something perdures just in case "it persists by having different temporal parts, or stages, at different times, though no one of its parts is wholly present at more than one time."[3] Say I see Bush on the stump at t3; I am only seeing a part of him, a single temporal part of him, at t3. Other temporal parts of Bush are elsewhere, as it were, when he is speaking at t3, and are not present at t3.

The notions of a temporal part and a perduring continuant at first may seem a bit fuzzy, a bit implausible. Partisans explain these notions by an analogy to the notions of "spatial part" and "whole." Lewis writes "Perdurance corresponds to the way a road persists through space; part of it here, part of it there, and no part is wholly present at two different places."[4] Like a road stretching off toward the horizon, a perduring continuant has a series of non-overlapping proper parts, of which the whole is a sum.

Indeed, just as the road is extended in three spatial dimensions, so a whole continuant that perdures is extended in four dimensions, the added dimension being time. Heller writes, "we should think of matter as filling up regions of space-time. A physical object is the material content of a region of space-time," and not just of a region of space at a time.[5] Say a graduate student is created at noon and utterly annihilated at one. If we think he endures, we would most properly speak of him as existing "at different times; the same object exists at noon and at one."[6] But taking him to perdure instead, we should take him to fill up the time interval bounded by noon and one, so that "he does not exist at a single moment" but "exists *from* noon *until* one."[7]

Moreover, "for both spatial and temporal parts, we can point at or perceive or name a whole by pointing at, perceiving, or indicating a part."[8] One might name a perduring continuant at a time t1 by pointing at it and saying "This is Ralph." Although strictly speaking, one is only pointing at the temporal part that exists at t1, one does not merely name that temporal part. Rather, one names the whole, of which the temporal part at t1 is a proper part.

Furthermore, a person-stage, for instance, like any temporal part, "is a physical object."[9] It "does many of the things that a person does: it talks and walks and thinks, it has beliefs and desires, it has a size and shape and location" and "temporal duration as well. But only a brief one."[10] A temporal part of Bush may have a duration for an interval of time, thinking and acting on its own. It "begins to exist abruptly, and it abruptly ceases to exist soon after."[11]

The last point about temporal parts with duration abruptly beginning and ceasing might be misleading. We should see Lewis as claiming that temporal parts have sharp boundaries marking each off from every other. It is not that temporal parts come to be in succession. If one thought they came to be, one might well consider perdurance "a crazy metaphysic."[12] For, it would seem

> The metaphysic yields that if I have had exactly one bit of chalk in my hand for the last hour, then there is something in my hand . . . which was not in my hand three minutes ago, and indeed such that no part of it was in my hand three minutes ago. As I hold the bit of chalk in my hand, new stuff, new chalk keeps constantly coming into existence *ex nihilo.* This strikes me as obviously false.[13]

So much for perduring continuants? No—friends of perdurance are careful to distance themselves from the position that temporal parts come into being in succession. That is not part of their picture of perdurance, so the objection that temporal parts would come to be *ex nihilo* does no harm to their theory.

The objection assumes that "exists" has a tensed sense. But "Four dimensionalism cannot accept the tensed sense of existence . . .. If there are four dimensional objects that extend beyond the present moment, the sense in which there *are* such things must be temporally neutral."[14] The whole four-dimensional continuant, which does not exist at any single moment, exists in the tenseless sense of "exists." The whole itself does not exist, as a whole, in the present at any time.

The point is explained by another spatial analogy. Consider a white paper, "Bourgeois." Put Bourgeois in a small lockbox with one corner hanging out. If asked where you put it, you might well say Bourgeois is in a lockbox, though strictly this is not true, since only a proper part of it is in the box. Just so, in a loose and popular manner of speaking, a whole perduring continuant exists at each time for which it has an existing temporal part, although strictly speaking it "is temporally too large to exist now."[15]

It follows that whole perduring continuants tenselessly exist whole. No part of a perduring continuant comes into being. Nor could the perduring continuant itself come into being, although nothing said so far rules out their being parts of still greater wholes. If the whole could come into being, so could its parts. But we have already precluded the possibility of that consequent. Thus, the medium-sized furniture of the world, including our tables and chairs, our plants and neurotic cats, despite the contrary position of ordinary belief, does not come into being, but tenselessly exists in a sort of stasis.

IB Why would anyone believe in four dimensionalism?

There are two standard arguments in favor of four dimensionalism. Lewis writes that "The principal and decisive objection against endurance, as an account of the persistence of ordinary things such as people or puddles, is the problem of temporary intrinsics."[16] It is a fact *prima facie* that

> Persisting things change their intrinsic properties. For instance shape: when I sit, I have a bent shape: when I stand, I have a straightened shape. Both shapes are temporary intrinsic properties; I have them only some of the time. How is such change possible?[17]

Lewis assumes one continuant cannot have incompatible intrinsic properties at the same time. Continuants change, and acquire incompatible properties at different times.

What exactly is the problem with persistence through change? Why not just say any problem here is solved by noting that the properties are not had at once by the same continuant, but at different times?

The problem is that the indiscernibility of identicals *prima facie* is violated. That is, for any two items x and y, if x and y are identical, whatever is true of the one must be true of the other. That is, they must be indiscernible in the sense of having all the same features and relations. It follows from the principle of the indiscernibility of identicals, for any two objects, if they differ in any of their properties, they are not identical. But Ralph at t1, say, is bent, and Ralph at a later time, t2, is straight. Is Ralph at t1 the same object as Ralph at t2?

It seems not—the object at the earlier time has an intrinsic property that the object at the later time does not. Yet according to our ordinary view of change, Ralph would survive. The philosophical task is to vindicate our ordinary view.[18]

Three dimensionalism does not render Ralph's persistence plausible. As Lewis sees it, a three-dimensionalist has two strategies. First, he might say that "shapes are not intrinsic properties" but rather are really "disguised relations, which an enduring thing may bear to times."[19] Thus, Ralph is related to the property of being bent at t1, and to the property of being straight at t2. The strategy applies "to all other seeming temporary intrinsics."[20] Ralph's intrinsic nature turns out to undergo no change from t1 to t2. He is first bent, and later straight, but these are extrinsic properties of Ralph. Lewis disregards this strategy since it implies the denial of intrinsic change. As such, the very thing to be explained, persistence through intrinsic change, is left unexplained.

Second, the three dimensionalist may insist that "the only intrinsic properties of a thing are those it has at the present moment. Other times are like false stories."[21] At the present time, time t2, there is no time t1. Since at t2, there is no time t1, then at t2 the continuant doesn't have the property it supposedly had at t1. Thus there is no difference in the intrinsic properties the thing had at different times, and a contradiction with the identity of indiscernibles is avoided. Lewis rejects this solution, since "it rejects persistence altogether."[22] According to the second three-dimensionalist strategy, one and the same thing does not exist at two different times. Thus, one and the same thing does not persist. But persistence through change was just the phenomenon to be explained.

In contrast, four dimensionalism can explain persistence through change in intrinsic properties. Since Ralph perdures, he has temporal parts. One temporal part is bent, and another temporal part is straight. These are different temporal parts to begin with, so there is no problem with one temporal part having both incompatible intrinsic properties. Nor, strictly speaking, does the whole continuant tenselessly have both intrinsic properties without their being indexed to different temporal parts. Thus, the indiscernibility of identicals is not violated. In addition, the change is one involving intrinsic properties, since each property in question is intrinsic to the temporal part that has it. Since four, but not three, dimensionalism can explain the ordinary facts of persistence through change, we should prefer four to three dimensionalism.

There is another argument for four dimensionalism from the fact that medium-sized things, especially organisms, persist through the loss of some of their parts. Suppose at t1 Clinton is a healthy, full grown woman. But by a later time, t2 she, tragically, has lost a limb. However, she survives the change. A three dimensionalist account of the loss of Clinton's part is incoherent. Let Clinton at t1 be the healthy, intact woman. Clinton at t2 is the woman, no longer intact. Clinton-minus is all of the material stuff that Clinton is composed of, except for the material of the part she loses by t2. Clinton-minus at t1 is this stuff at t1, and Clinton-minus at t2 is the stuff at t2. The argument runs like this:[23]

1. Clinton at t1 is numerically identical with Clinton at t2.
   They are numerically the same thing, before and after the loss of a limb.
2. Clinton-minus at t1 is numerically identical with Clinton-minus at t2.
   They are numerically the same hunk of material stuff.
3. Clinton at t2 is numerically identical with Clinton-minus at t2.
   After all, Clinton at t2 and Clinton minus at t2 have all of their material parts in common, and they occupy exactly the same region of space at t2.
4. Clinton at t1 is numerically identical with Clinton-minus at t1.
   For (3), Clinton at t2 and Clinton minus at t2 are numerically identical, and (1)
   so are Clinton at t1 and Clinton at t2. Since numerical identity is transitive,
   Clinton at t1 and Clinton-minus at t1 must be identical.
5. But Clinton at t1 and Clinton-minus at t1 are not numerically the same.
   For one has a part that the other lacks.

Between (4) and (5) there is a contradiction. However, the three dimensionalist is committed to each of (1)–(3). For the three dimensionalist, Clinton and Clinton-minus are enduring individuals existing wholly at the times in which they exist. (1) claims that one and the same woman endures from t1 to t2, surviving the loss of a limb. (2) claims that one and the same hunk of material endures from t1 to t2. A three dimensionalist *prima facie* would accept these claims. The argument can be generalized to apply in other cases of the loss of a part. Thus, given the cogency of the considerations advanced for the premises, the three dimensionalist is stuck with an incoherent account of what is involved in the loss of a part.

A four dimensionalist allegedly can explain the loss of a part without incoherence. He can take Clinton at t1 and Clinton at t2 each to be temporal parts of Clinton, and he can take Clinton-minus at t1 and Clinton-minus at t2 each to be temporal parts of Clinton-minus. At t2, when Clinton-minus at t2 and Clinton at t2 are numerically the same, Clinton-minus and Clinton overlap. His position is without incoherence, since for him, the Clinton/Clinton-minus argument is unsound. A four-dimensionalist may reject (1). Clinton at t1 and Clinton at t2 are not each numerically the same woman, Clinton, existing at different times, but are temporal parts numerically different from one another. The same type of objection may be made against (2). For a four-dimensionalist, this kind of argument to absurdity is unsound. Thus, the four dimensionalist claims that his theory explains the ordinary fact of persistence through change of intrinsic properties and the loss of a part better than three dimensionalism does. Therefore, four dimensionalism should be preferred to three dimensionalism.

IC Criticism of the arguments for four dimensionalism

I shall offer an alternative to the four dimensionalist's account of persistence through change in intrinsic properties and loss of parts. I am not claiming my alternative is the *only* plausible one. Rather, I have a much more modest aim—to give an alternative plausible *inter alia.* First, I shall present a brief version of Aristotle's theory of the substratum and point out how it is not vulnerable to the criticism implied in the arguments for four dimensionalism.[24]

Let us examine the argument of *Physics* I.7–9, the *locus classicus* of the theory I will develop. The theory is aimed at answering Parmenides' claim that coming to be is impossible. As Aristotle puts it,

> they say that none of the things that are either comes to be or passes out of existence, because what comes to be must do so either from what is or from what is not . . .. For what is cannot come to be (because it is already), and from what is not, nothing could have come to be.[25]

The intuition behind Aristotle's paraphrase of Parmenides is that nothing can come to be from nothing. But any case of coming to be will be from nothing. Note that we have already seen a similar premise, namely that coming to be *ex nihilo* is absurd, operating as a constraint in the development of four dimensionalism.

Aristotle accepts the premise that coming to be *ex nihilo* is absurd, writing "We ourselves are in agreement with them [the Eleatics] in holding that nothing can be said without qualification to come from what is not."[26] However, he holds that coming to be is *not* coming to be from nothing. Rather, what comes to be, comes to be from a material substratum. The material substratum is something. Let me explain. Consider the case of a man, Igor, coming to be musical. In such a case, "We say that one thing comes from another thing, and something from something Different . . .. I mean the following. We can say the man becomes musical, or what is not-musical becomes musical, or the not-musical man becomes a musical man."[27]

There are these three ways of describing Igor's coming to be musical. Aristotle notes that in two of the descriptions, that which comes to be does not survive the change. The not musical man and what is not musical both fail to survive when the musical man comes into being. If either accurately described what went on when the musical man came into being, then the musical man's coming into being would be a case of sheer succession, a case of one thing passing out of existence and another coming into being anew. In that case, coming into being would be vulnerable to the criticism leveled earlier against a version of four dimensionalism: according to the theory, something comes to be *ex nihilo*. Nothing of what came to be was present in what existed before, and nothing of what existed before survives in what comes to be.

It seems then that the third description, according to which the man becomes musical, is the only description according to which coming to be is possible. For, when a man comes to be musical, "the man remains a man and is such even when he becomes musical."[28] We may account for coming to be, then, by claiming that the musical man comes to be from the man. There is something underlying the coming to be of the musical man that remains after the change. Thus, the musical man's coming to be is not a case of coming to be *ex nihilo*.

In cases of coming to be, what underlies is in a qualified sense that which comes to be. Aristotle writes "we maintain that a thing can be said to come to be from what is not in a qualified sense, i.e. accidentally."[29] The man is accidentally not musical before he comes to be musical. That is, given what a man is, he equally well can be musical and can fail to be musical. The range of what he equally well can be and can fail to be is set by what he is. The man is able to survive his coming to be musical, then, because it is already possible that he is that which he will become. Or to use the jargon of "act" and "potency": a man already is *potentially* that which he *actually* becomes.

How does the substratum theory enable an Aristotelian to explain the persistence of continuants through change in intrinsic properties and the loss of parts? In the first argument for four dimensionalism, Lewis asked the three dimensionalist to explain how Ralph at t1, who has the intrinsic property of being bent, could be the same as Ralph at t2, who does not have that property. The Aristotelian should point out that the name "Ralph" functions ambiguously to pick out either the substratum or the whole of the substratum with what Lewis calls its intrinsic properties. The latter whole, which is the substratum with its intrinsic properties, is only incidentally Ralph. Ralph, the substratum, is the same at t1 and t2. This is not to deny what Lewis calls intrinsic change: the wholes which are only incidentally Ralph really do come and go. However, the Aristotelian holds that those wholes which are only incidentally Ralph may come and go without implying that the substratum itself changes.

The four dimensionalist's second argument asks for an explanation of the loss of a part without incoherence: how is it possible that

Clinton loses a limb? The Aristotelian should respond to the four dimensionalist's argument by denying premise (3), which claimed that Clinton at t2 is numerically identical with Clinton-minus at t2. Clinton-minus at t2 is just Clinton's material stuff; it is not a woman. Clinton at t2 is a woman. The fact that Clinton at t2 and Clinton-minus at t2 have the same matter does not imply that they are numerically identical. The Aristotelian holds that Clinton-minus is missing a part that Clinton at t2 has, namely the form "human." Without (3), the four dimensionalist's argument will not generate a contradiction.

Aristotle wishes to extend his account of accidental change to *all* cases of coming to be; he writes "substances too . . . come to be from some underlying thing . . .."[30] He continues, saying "we find in every case something that underlies from which proceeds that which comes to be; for instance, animals and plants from seed."[31] *Prima facie*, this is an error on his part. For the matter in the coming to be of a substance does not survive the coming to be of a substance. The seed from which the human comes does not survive in the human who comes to be. As Graham writes, "in the paradigm cases [of coming to be] a substratum continues in such a way that it is present in the final product as well as in the initial state," but "the seed does not continue in the final product; it has long since disappeared when the organism reaches maturity."[32] Aristotle seems to have landed back in the original predicament against which he offered the substratum theory as a remedy. For substances seem to come to be without a substratum, *ex nihilo*.

Can Aristotle's theory be emended? I suggest that it can, by the introduction of prime matter into our account.[33] Up to this point, we have talked of matter informed in some way. Prime matter on its Thomist reading is matter devoid of any form; it is only potentiality actualized by form, without any form or act itself. Aquinas writes, "Matter understood as without any form and privation, but subject to form and privation, is called prime matter, because prior to it there is no other matter."[34]

Thus, it cannot exist alone: if it were to exist alone, it would be a sheer potentiality rather than anything actual, which is absurd. Again, Aquinas writes, "Prime matter can never exist just as itself because, since it does not include form in its notion, it cannot actually be. A thing is actual thanks to form, but prime matter exists only potentially."[35]

The purely potential prime matter, on Aquinas' theory, is what survives substantial change. One and the same prime matter can be informed by two substantial forms in succession without passing out of existence. Aquinas writes, ". . . prime matter is never devoid of form and privation, for sometimes it is under one form, sometimes under another."[36] The matter which must pass out of existence when a substance perishes is just the matter which received its actuality from the operation of the substantial form. With the substantial form gone, that matter must pass away, since it loses its actuality. However, prime matter itself receives no actuality from the substantial form; in itself, it is merely potential. Thus, it does not go out of actuality when the substance perishes.

Yet according to Scotus, Aquinas' account of prime matter is unsound. For Aquinas, what survives substantial change, prime matter, is not an actual entity, but a mere potentiality. Thus, there is no actual entity that survives the change from one substance to another. Is that sufficient to answer the objection that substantial change is just a thing coming into being *ex nihilo*? Scotus thought not: he proposes that we conceive of prime matter *not* as a sheer potentiality itself devoid of form and act, but as an entity with its own act devoid of form.[37] Then we may say prime matter, as something actual, survives the change from one substance into another, even though in itself, it has no form. Thus, a substance generated anew is not generated merely from a potentiality, but from the surviving, actual prime matter.

Recall, however, that I claim the explanation given by substratum theory is s*uperior* to that given by four-dimensionalism. Why is this? The four dimensionalist is caught in a dilemma. It is a logical truth that the fundamental furniture of our world is either necessary, so that it *could not* be otherwise than it is, or else contingent, so that it *could* have been otherwise than it actually is. But the four-dimensionalist cannot happily admit either. On the one hand, he does not wish to gratuitously presume the fact that our world has the fundamental furniture it does is simply *necessary*. But he cannot admit it is contingent without admitting temporal succession assumed only by the endurantist.

Suppose that a certain human continuant as a whole did not exist. In that case, nothing could cause it to be, *ex nihilo* as it were. For that has already been admitted as absurd. It follows then that if it does not exist, it necessarily does not exist. For, as we have seen, it cannot have a cause. Assuming four-dimensionalism is true for the sake of argument, the human continuant is possible. We know this from our experience of human temporal parts, for if human temporal parts are actual, human continuants must be possible. In that case, the human continuant necessarily exists. Otherwise it would be possible, without actually existing. But that is absurd, since if it does not exist, then its existence is impossible, contrary to the hypothesis that it is possible. Therefore, possibility without actuality is ruled out for the human continuant. It follows that—given its actual existence—it necessarily exists. No special, peculiar feature of any particular human continuant, or of human continuants in general, was used in the argument. Therefore it applies indifferently to each continuant. Therefore, we may say that on the ontology of four dimensionalism, each continuant necessarily exists.

I infer that Scotus' substratum account of persistence through change is more plausible that the account given in the theory of four dimensionalism. On four dimensionalism, note (1) we must give up the ordinary sense of change as being a phenomenon involving endurance, (2) we must admit, contrary to appearances, what seems to us to be changing things that come into being actually do not come into being at all, but exist in an everlasting stasis, never coming to be, and (3) we must admit that each of these items is a necessary being. On Scotus' substratum theory, we may retain our ordinary sense of change as involving endurance, we need not see ourselves as mistaken in our ordinary belief that things come into being, and finally, we may admit that some things are contingent. On these grounds I submit that Scotus' substratum theory is to be preferred.

II Scotus on Substantial Form

In this section, I argue for the existence of a substantial form as an essential part of a composite material substance. The notion of substantial form has been criticized as being incoherent, due to what seems to be an ambiguity. Should we think of the substantial form as an abstract property, like a universal, or should we think of it as something concrete, like a particular agent that can act as an efficient cause? The notion of substantial form seems to combine these, in spite of the fact that nothing can be both abstract and concrete. Thus, Bernard Williams calls substantial forms, like the soul, "categorically puzzling."[38] On the one hand, "soul is said to be substance, and there are references . . . to *a* soul or *the* soul," but on the other hand, "the claim [that the soul is a substance] does not seem to introduce any particular item for any particular soul to be. It seems to introduce something more in the nature of a fact, or, possibly, a property."[39] How can one and the same entity be both an object and a property? It seems impossible, yet this is how the soul is characterized by Aristotle, and by extension, how each substantial form is characterized.

Likewise, Anthony Kenny writes "there seems to be a tension between two different ways of understanding the notion of form. First there is what we may call the abstract notion of form."[40] According to the abstract notion, the form is not an efficient cause or an agent, but only a formal cause. The form is what makes a human being human, or a hot surface hot. In this sense, the form is not a concrete object, but an abstract entity more like a structure or an organization of something's material parts. In addition, "there is the notion of form as an agent," as an efficient cause. In that sense, the soul "moves the body."[41] For instance, the form is not merely a structure, but a source of a human's moral action.

In my judgment, these readings of Aristotle have in common the fault of calling on the substantial form to do too many jobs: both the work of a particular thing, and the work of a property. My solution, following Scotus, is to separate the jobs and assign each one to its own distinct entity. That is, in a material substance there is both something individual, and something that is not individual, each with its own type of work.

For Scotus, the substantial form is an *individual thing*, (a) not a *universal*, and (b) not a *property*. Each of these points should look surprising. One influential line of interpretation, espoused by Loux, Frank Lewis, and Wedin, has Aristotle holding substantial forms themselves to be each universal. In a subsequent chapter, I shall offer an argument on Scotus' behalf *against* taking the substantial form to be universal. Point (b) is aimed at Cross' reading of Scotus, which argues that "talk of substantial form is one way of talking about some of the essential properties of a substance"[42] and suggests "that an account of substantial form as *structure* will probably be sufficient to do all the metaphysical work Scotus needs."[43] In my opinion, Cross seems unclear on Scotus' metaphysical framework. As I have noted in a prior chapter, Scotus assumes a constituent ontology, on which a material substance is a mereological whole with numerous constituent proper parts; Scotus does not work with an ontology of objects and properties. Talking about forms as if they were properties or groups of properties is like mixing metaphors.

IIA Scotus on the existence of substantial forms

I shall offer two arguments from Scotus' text for the existence of substantial forms. He is not pre-occupied with the question of whether they exist; and does not seem anywhere to explicitly argue for them. Thus, in this section I take Scotus out of context: I find him providing premises of arguments that I construct on his behalf for the existence of substantial forms. The first argument is from the nature of intrinsic causation, and the second is from human cognition. The first argument is fully general in its scope: wherever any material substance operates causally, Scotus argues that it follows some form operates causally.

Aristotle's argument from Metaphysics 17

Let us call this first argument the aggregate argument (AA). AA applies to entities that are compounds of material parts whose unity as a whole is greater than the unity of a mere heap. Hence Aristotle writes,

> Now it is clear that no enquiry or instruction is possible in the case of simple things, and some method other than enquiry has to be adopted here. However, things that are compounded in such a way that the whole is a unity, not like a heap but like a syllable.[44]

He has in mind cases of enquiry in which one asks, "Why are these things here a house?" or "Why is this thing here a man?" or "Why is this body in this state a man?" That is, he assumes there is an item, *x,* which is a whole, say a man or a house. *X* has material parts, *p1*, *p2*, and so on, like bricks and mortar in the case of a house, or a body with flesh and bones in the case of a man. In each case, the material parts are not merely a heap, like a pile of bricks or a mere lump of flesh. They are, rather, bricks and mortar in a certain order. Bricks and mortar in that order are a house. Likewise the flesh and bone of a human body are not just cells aggregated together in any old fashion in a sad, soggy heap. Rather they bear a certain order to each other, and flesh and bone in that order are human. Aristotle seeks the cause of that difference between material items being merely a heap and being parts of a substantial whole. According to Aristotle, what is sought is the cause by which the matter is so-and-so, that is the form. And that is the substance.[45] The form is inferred as that which accounts for diverse material parts making a unity greater than that of a heap.

AA assumes a difference between mere heaps and substantial unities and that this difference holds apart from human conceptualization of the world—and indeed any human activity. Using AA, Aristotle argues by inference for the existence of what accounts for the difference between heaps and unities—the substantial form. Can the distinction be made out *prima facie*? A particular heap of bricks is surely a whole of which each brick is a part. Moreover, it is a related whole, each brick bearing some manner of real relation to another—say, each is in contact with some other brick of the whole pile. Furthermore, it is plausible that this pile is a member of a kind, *brick-pile,* bearing a clear resemblance to other piles of bricks. Why not say that every heap of bricks is a material substance? The same objection may be made for many other types of piles.

The difference, it seems to me, is that *mereological essentialism* holds for heaps but not material substances. Every part of a heap must remain part of the heap if the heap is to continue existing. If one part of the heap is removed, then strictly speaking, a new heap has come into existence and a prior heap passed away. Likewise a heap that gains a new member is a new heap. More precisely, heaps satisfy mereological essentialism (henceforth MESS) that whatever part a heap has it has necessarily. I take MESS to express the general intuition behind mereological essentialism. However, unlike heaps, material substances need not satisfy MESS to continue existing. Material substances can survive the gain and loss of certain of their parts. Material substances have essential parts that cannot be lost if the substances are to continue existing; it is just that *not all* of their material parts are necessary, as required by MESS.

Aristotle's argument AA runs from 1041b12–28; its main steps are:

Aggregate Argument, AA

1. A substantial whole w is not just its material elements p1 and p2.
2. Thus, w is not just its material elements, but also something else, x, besides its material elements, p1 and p2.
3. X cannot itself be either (a) an element p3 or (b) composed of elements p3 and p4.
4. Thus, (a) x exists, and is neither an element nor composed of elements, and (b) x is the primary cause of the being of w.

Aristotle gives two examples of wholes with their material elements: syllables and flesh.[46] Illustrating (AA1), Aristotle lets the syllable "BA" and flesh take turns standing for w. Aristotle stipulates that "B" and "A" are the material parts of the syllable "BA," while fire and earth are the material parts of flesh. He claims that the syllable "BA" is not just its material parts. Otherwise, the syllable "BA" would exist in the imperative "be smart," as the material part "B" exists in "be," and the material part "A" exists in "smart." However, where the material parts "B" and "A" are divided from one another, as they are in "be smart," the syllable "BA" does not exist. The case is similar with flesh: if flesh were just its material parts of earth and fire, every campfire would be a barbeque.

Something more is required for a syllable to exist than just the syllable's material parts to exist, just as something more is required for flesh than just the material parts of flesh. That is what Aristotle claims in premise (2). In premise (3), he claims both (a) that this "something more" cannot be another material part of the whole, which seems plausible, and (b) that it cannot itself be a whole composed of material parts, which also seems plausible. (3a) and (3b) are plausible for the same reasons The same considerations that moved us to confess that a syllable is not just its material parts would move us to confess that the syllable is not just its material parts plus another material part. For this added material part, p3, added to the letters "B" and "A" could be divided from the letters, just as the letters are divided from each other. Suppose they are divided; there is no reason to think that the three material parts would somehow compose a syllable.

Whatever *x* is, it exists. A non-being could not be added to the material parts of *w* to make a difference from their state of being divided. (3) rules out that the "something more" added to *p1* and *p2* to make *w* can be another material part, whether itself simple or composed of material parts in turn. Thus, *x* must be an immaterial entity, according to (4a), which according to (4b) functions as cause of the parts and x being united together as proper parts of a new and different entity, the whole, *w*.

That seems like a strong claim on its face. He may have in mind the example of the syllable, where the added *x*, is a form in the sense of a cause ordering the letters together in the right way to make "BA" rather than, say, "AB." Once the material parts are together with the right order, it follows that the whole, the syllable, exists. In the case of the syllable, the order is rather static, consisting of the material parts being in a certain position. Other types of wholes may require more complex orders among their material parts which involve more than their positions. The part of the whole which brings about the order of material parts must be of a different kind from the material parts in the sense of being non-material.

However, in response to the argument so far one may wonder why the immaterial cause of the order of a substance's material parts must be immanent or itself a part, though a non-material part, of the substance. Why can't there be a cause of the unity of x's material parts from outside x? Aristotle would, presumably, concede that there could be causes of substantial unity from outside, such as parents who are efficient causes of their child's coming to be.

Nevertheless, the begotten substance displays a dynamic, self-sustaining unity among its material parts. That is, even if a cause outside of the substance accounts for the unity of the material parts as an efficient cause, the material parts themselves display an ordered unity in the very space that they occupy; the order seems immanent to the substance. For instance, the matter making up an organism's organs displays an order. Furthermore, the matter standing in that order performs operations internal to the substance that it would not have been able to perform had it not been in that type of order. For example, the matter may be organized into tissues of an organ that detoxifies the blood. The order is not causally inert, but contributes toward causal activity internal to the substance. Even though the order itself is not a material part, it seems to have a location. It follows that there is a principle of the unity of a substance's material parts which is internal to the substance and a proper part of it, but not itself material.

Argument IIA2 from Human Cognition

In the course of arguing against our being able to know our souls' immortality apart from special revelation, Scotus shows that "[t]he intellective soul is the specific form of man,"[47] from which I infer, assuming the existence of humans, that there are substantial forms. According to Scotus, we are to infer the existence of a substantial form from its effects, that is,

> [A] . . . it is not easy to find either an *a priori* or an *a posteriori* argument, unless it be based on a function proper to man, for the form is known from its proper function, even as matter is known from the existence of change.[48]

I take "proper" here to be an extension of Porphyry's *proprium.* Just as a thing's property is necessary to it, and only belongs to things of its species, so an operation proper to man is one of which each human is normally capable and which is unique to humans.[49] Apparently Scotus recommends:

> [B] For any individual *x*, if there is an operation *O* proper to *x*, then there is a form *F* by which *x* has the operation *O*.

Using principle [B], one may argue from a material thing's proper operation to an immaterial constituent of the thing which functions as the cause of that operation . In the case of human beings, he argues:

> [C] Man formally and properly understands; therefore, the intellective soul is the proper form of man.[50]

From the fact a human can understand, Scotus infers the existence of a causal principle by which the human is able to understand: the intellectual soul. He assumes that wherever one finds things of a kind each with the same type of causal operation, one may infer the existence of a substantial form in each of them that is the principle of that operation. In each case, the substantial form will be individual; if the souls of individuals were not individual, different people would be able to share *the same* intellectual soul.

Why might Scotus have held [B]? Suppose that there are individual women able to understand. Scotus seems to picture the operation of understanding as if it were a state of the soul or, in his terms, an accident of the soul. According to Scotus, the operation of understanding requires a subject, "for it is not always present in us."[51] That is, the operation is an accident that naturally belongs to something. Why should we infer that the subject of these states or accidents of understanding is an *incorporeal* form or soul? Scotus distinguishes three senses of "incorporeal": (1) not involving a corporeal part or organ; (2) not extended in any way; (3) with reference to an object, when that object is considered without its *conditiones materiales,* for instance, its place and the time during which it exists.[52] I mean to adopt sense (2): the individual women in our example are to have no parts that are unextended in place and time.

Suppose for the sake of argument that the subject is not incorporeal. In that case, each individual human could be, as far as intellectual cognition is concerned, merely a material being. That is, states of understanding would be material states belonging to a material thing. Scotus rejects the possibility of thinking matter, arguing that the item by which they perform the operation of understanding cannot be material. In the case of the operation of understanding:

> [a][w]e experience in ourselves that we know the actual universal. [b]We experience that we know being or quality under a more general notion than that characteristic of the primary object of even the highest sense faculty . . .. [c]We distinguish that we experience the whole class of sensible objects from what is not such . . .. [d]We also experience that we know the very act whereby we know these things and we experience that this act exists within us.[53]

He offers no argument in support of assertions [a]–[d]. He thinks "by a certain sense, namely an internal perception, we experience these acts within ourselves."[54] One denying that he experiences such acts is "the same with one who says: 'I do not see color here'"[55] while apparently looking at something colored in optimal conditions with functioning eyes; our experience of such cognition is supposed to be evident without the need of argument.

Scotus asserts "the knowledge of any of these (i.e. my [a]–[d]) cannot be attributed to any sensitive faculty."[56] Why not? He thinks our senses do not deliver universals. We may see this man or that man, but cannot see or hear the universal human, no matter how far or how long we search. Likewise, when one sees a red surface, the redness of the surface is not a universal, as it has a definite location in a place and at a time. Whatever we sense has individual material conditions, existing in a place or at a time, which cannot belong to a universal. Again, no sense faculty can deliver something outside its range. Literally, we cannot see middle C, or hear the color blue. Middle C is outside the range of vision, and blue is outside the range of hearing. Just so, cognition of high-order universals, like the concept of being, is outside the range of any sense. What we sense is always just this and that being.

Therefore our knowledge of [a]–[d] must be explained by something other than any sense faculty, for they are incapable of the job. Why cannot there be some material part of a human, other than a sense organ, which has cognition of [a]–[d]? I think Scotus' basic point is that while the state of understanding can only be actually universal, no material part of an individual can be actually universal. If some material part of an individual could cognize a universal, it would have to be capable of possessing an actual universal. Scotus presumes no material part has that potentiality, since every material part must be individual rather than universal. Material parts cannot avoid being located at a definite place and time, and whatever is so located must be individual. In summary form, Scotus argues like this:

1. Every state of understanding must be universal.
2. No material state can be universal; Thus,
3. No state of understanding can be material.

But why would Scotus mean to say the *subject* of intellectual cognitive operations cannot itself be something extended and material? If it were material, it could not be indifferent to its singularity; singularity would be necessary to it. That is, inasmuch as it would be material, it would *have* to be located in space and time and would therefore *have to be* singular. But if singularity is necessary to it, something that is not singular, like the state of understanding, cannot belong to it. For the state of understanding *must* be universal. The two could not go together coherently as a whole. It follows that the subject of human intellectual cognition must be an incorporeal entity. As "every other form is extended" in a human being, this immaterial subject "can be nothing other than the intellective soul."[57]

III Is Prime Matter Really Distinct from Form?

Duns Scotus is committed to a matter/form dualism *prima facie* anticipating the more familiar mind/body substance dualism of

Descartes, though it would be wrong to regard Scotus as a *substance* dualist, as he denies matter and form of themselves are substances. On the other hand, it would also be wrong to regard him as a *property* dualist, since he takes matter and form each to be *res*: things. Thus, Scotus argues for what may seem to us like a type of dualism not mapped on our metaphysical landscape, one between *non-substantial things*.

It follows on Scotus' dualism that matter and form are things really distinct from each other. *Real distinction* is used here in a sense familiar from Descartes: each *relatum* can exist on its own, not only without a particular other, but without anything of the other's kind. For instance, on Scotus' view not only is this prime matter really distinct from this form—say, this particular humanity belonging to Joe—but also from any other form.

Richard Cross has recently criticized Scotus,[58] claiming that his arguments for the real distinction of matter from form commit a basic modal mistake, according to which Scotus is not entitled to infer from this prime matter being really distinct from this form to matter being really distinct from any form at all. In the following sections, I shall defend Scotus' arguments from Cross' criticism, working out a reply on Scotus' behalf. First I shall present Scotus' case for the real distinction of matter from form in two arguments and give Cross' critique of them; then I shall offer a reply that gives a valid interpretation of Scotus case *contra* Cross.

IIIA Scotus' argument

Scotus claims "it is no contradiction that [some] matter is without any substantial and accidental form,"[59] that is, it is possible for matter—prime matter—to be without any form. *Prime matter* and *form* are technical terms for Scotus whose familiarity he takes for granted. Take Pheidias' *Athena Parthenos* as an example of a material substance. The particular shape unique to the statue would count as its form. Although one could talk of *Athena Parthenos* as having a certain kind of shape, I mean to restrict talk of form to talk of a particular form: the unique shape peculiar only to *Athena Parthenos*.

Prime matter is a bit harder to get a handle on: in this case, it would not be the ivory out of which the statue is made. The ivory has actual, particular features of its own, whereas prime matter would be instead a basic stuff without actual, particular features like color or weight, but with a potentiality for having such actual features. That *there is* such a basic stuff as prime matter I do not wish to argue here at length; I shall only recount Scotus' basic intuition behind positing it. In short, he thinks of it as what goes together with a material substance's form to make it possible that the substance as a whole came to be. As he does not wish to picture substantial generation as involving sheer replacement of one substance by another, he believes a substance must come into being from some basic, non-substantial stuff.

Scotus argues that the prime matter underlying a substance's form can exist without that form, and without any form at all. The first argument Scotus gives for this thesis depends on the assumption that prime matter is contingently related to any form with which it may be joined:

Argument I: from prime matter's contingent relation to form

1. Prime matter is contingently related to any form.
2. Whatever is contingently related to anything of an absolute genus is contingently related to that absolute genus.
3. Therefore, prime matter is contingently related to the whole genus of form.[60]

The initial premise (I1) refers to one item being contingently related to another; what does Scotus mean? Roughly, for any relation *R* and any items *x* and *y*, *x* contingently bears *R* to *y* just in case it is possible that *x* bears *R* to *y* and it is possible that *x* does not bear *R* to *y*.

That is rather abstract; to see what he means, suppose an unfinished bedroom wall needs to be painted. The couple pondering which color to go with cannot seem to agree: electric blue or bubblegum pink? After much haggling, they settle on bubblegum pink. Supposing the wall and the bright—even glowing—shade of pink are related by the dyadic predicate *is painted*, such that the wall is painted pink, it follows *it is possible that the wall is painted pink.* Realizing their mistake, they take heart in the fact the wall need not be painted pink. They might have painted it electric blue, after all—and moreover, they can go back and "do it right" this time. It follows *it is possible that the wall is not painted pink.* We may infer that the wall is contingently related to the color pink.

Scotus would hold that just as the wall and the color pink are contingently related, so prime matter and its form are contingently related. The basic stuff that received the form of the *Athena Parthenos* need not have received just that form; we might just as well have been treated to a garishly massive, nude Hercules instead. Or the basic stuff that received the form of this human soul, Joe's soul, might just as well have received the form of some other soul—Jane's—instead.

Let us return to our busy couple. Having finished painting the wall electric blue, they have another change of heart and proceed to strip the wall of the blue and paint it taupe. It follows the wall is contingently related to electric blue. Indeed, generalizing on the basis of their experience, we may infer it is contingently related to taupe as well, and to any particular shade of color we might paint it. One may infer for any particular shade of color, *c*, the wall is contingently related to *c*. It is as if we were to say

> The wall is contingently related to bubblegum pink, and
> the wall is contingently related to electric blue, and
> the wall is "taupe" as well and . . .

going on that way for each particular shade. Likewise with prime matter: Scotus means to say with the initial premise (I1) that the prime matter is contingently related to the form it actually has, and to any particular form with which it might be joined. One might put his point this way:

> The prime matter is contingently related to Joe's soul, and
> the prime matter is contingently related to Jane's soul, and
> the prime matter is contingently related to Fluffy the cat's soul, and . . .

going on that way for each particular form: so much for the initial premise. One may say the prime matter is contingently related to all forms one by one or *distributively.*

What does Scotus mean in the next premise (I2), that whatever is contingently related to anything of an absolute genus is contingently related to that absolute genus? An absolute genus is a kind under which absolute beings rather than relational beings fall. To claim an item is absolute is to call attention to its "thinghood." For example, it seems certain items can "stand" on their own: cats, dogs, and rose bushes. On the other hand, certain features or relations of these things, the cat's being to the right of the dog and the dog's sitting down do not seem to be things that can stand on their own. A sitting posture needs to be the posture *of* something—it cannot simply be a free-floating "sitting"—whatever that would mean. Likewise, the item *being to the right* cannot exist out on its own; it must hold between or belong to at least two things. The cat's being to the right of the dog and the sitting posture need to belong to things in order to exist at all. In that sense they are relational and not absolute entities for Scotus. In contrast, it seems the cat can exist without belonging to or being a feature of something; in that sense it "stands alone."[61]

What is a relational item like? Consider a scythe or a lens: their convex and concave sides are *correlative* to each other in a rather strong sense such that with one side posited, it follows the other side must exist. One side quite simply cannot exist somehow on its own. Similarly, *triangularity* and *trilaterality* are correlative properties: given the instantiation of one, the instantiation of the other must follow.

In the second premise Scotus seems to be saying that if an item *x* is contingently related to any single member of an absolute genus, it is contingently related to the conjunction of all of them *collectively*, not merely to each of them *distributively*. That is, instead of maintaining that

> the prime matter is contingently related to Joe's soul, and
> the prime matter is contingently related to Jane's soul, and
> the prime matter is contingently related to Fluffy the cat's soul, and . . .

going on that way for each particular form, Scotus means to say the prime matter contingently related to both Joe's soul, and Jane's soul, and Fluffy the cat's soul, and . . .

What's the difference? If the prime matter is contingently related to all the forms *collectively*, and not merely distributively, it can exist without any form at all. That is, prime matter would be able to exist, as Scotus believes it can, on its own.

IIIB Cross' critique of Scotus

Unfortunately Scotus is not as clear about why we should believe the second premise, that if an item *x* is contingently related to any single member of an absolute genus, it is contingently related to the conjunction of all of them collectively. The trouble so far as I can tell is not in passing from an item being contingently related to one member of an absolute genus to its being contingently related to all members distributively. The example of the couple painting their bedroom wall illustrated just such an unremarkable passage. Rather, the trouble seems to be in the passage from being contingently related to all members distributively to being contingently related to all members collectively.

He seems to support that move by appeal to divine omnipotence, arguing from the intuition that God can accomplish directly by means of divine power what God actually accomplishes indirectly with the aid of mediating secondary causes. He argues thus:

Argument II: from Omnipotence

1. Any absolute entity God creates with a mediating secondary cause God can create without that secondary cause.
2. God creates prime matter with form as a mediating secondary cause.
3. Thus, God can create prime matter without form.[62]

Suppose God actually creates steam by creating a gas oven on which a large pot of water is boiling. According to Scotus' argument from omnipotence, God could skip the oven and boiling water, and just create the steam. Likewise, Scotus presumes God actually creates prime matter with some form from which the prime matter exists with actual features; the form is like the gas oven. God could just as well skip the form and create prime matter directly on its own without any form.

At just this point, Scotus' argument seems to run into trouble according to Cross. As we have seen, Scotus moves from prime matter's separability from each particular form to its complete separability from form altogether. The error seems elementary: it would be a mistake to accept that *It is not necessary that he is 6' tall or over and it is not necessary that he is under 6' tall* and infer *It is not necessary that he is either 6' tall or over on the one hand or under 6' tall on the other hand.* While the former is very likely true for any man, the latter is most definitely false.

Perhaps, Cross implies, Scotus was mistaken about how necessity distributes across a disjunction.

Given

(A) Necessarily, either P or Q.

It does not follow

(B) Either necessarily P or necessarily Q.

Thus, (A) is consistent with (C):

(C) Both contingently P and contingently Q.

Yet, given his reasoning, Scotus would permit the inference of the negation of (A), that *it is not necessary either that P or that Q*, from (C). That is, he seems to be invalidly inferring *It is not necessary that this prime matter either belongs to this form or to that form* from *It is not necessary that this prime matter belongs to this form and it is not necessary that this prime matter belongs to that form.* Thus, even if prime matter is only contingently related to any form that actually informs it, it does not follow that prime matter is contingently related to form in general and can exist without *any* form.

IIIC My reply to Cross on Scotus' behalf

I contend that Cross' criticism is unpersuasive. Rather, it seems to me that we can make better sense of Scotus' reasoning by deploying the notion that for Scotus, material substance has a *mereological structure.* On the mereological picture of material substance I offer, an essence is a *constituent* of the substance.[63] According to the primary competing picture, which I shall call "event ontology", an object that has a property is said to exemplify or instantiate a property. Suppose that *being negative* is a property and an electron is an object. By saying "The electron is negative," one may indicate the property that the electron instantiates. An object's essence, on an event ontology, would consist of a group of properties that the object instantiates or exemplifies, where the properties in that group satisfy various other conditions: they each necessarily belong to the object, they do not necessarily belong to every object, etc.[64]

With the Aristotelian scholar Charlotte Witt, I say "an essence is not a property (or a cluster of properties) of the substance whose essence it is" and "it is also a mistake to think of the essence or form as a property of the matter."[65] However, she does not go far enough; she says nothing about a *constituent* ontology, and in addition, identifies essence with substantial form, whereas Scotus separates them. In my view, Scotus conceives substances as mereological wholes with proper parts, one of which is a form and another of which is what he calls the common nature or the essence. In Scotus' ontology a substance's essence is a proper part of the substance; the relation between the essence and the substance is not one of exemplification or instantiation.

Indeed, I contend what Scotus calls an essence is a constituent, namely a proper part, of a substance's form, and that the form itself is a constituent, a proper part, of a material substance. That is, Scotus holds that a substance's form is not a mereological atom, something without proper parts. Nor is it the same as the essence; Scotus distinguishes them. I do not wish to argue for my interpretation here, but only to point out its cogency by using it to respond to Cross' otherwise difficult objection.

To be sure, both my stand with Witt and the mereological view I propose are controversial positions among scholars of Aristotle. In particular, Michael Wedin, Michael Loux, and Frank Lewis; though different from each other in detail, they are sufficiently similar in overall outlook to constitute a cogent opposition to my position.[66] On their view, species or essences are distinct from substantial forms. Species are predicable of composite substances, but are not properly predicable of matter. Thus, taking "human" to stand for the species "human," we may say "Socrates is human," but not "This body is human." Predicating a species of a composite substance like Socrates, we are classifying it, not indicating—except incidentally—anything about the substance's internal structure. Thus, it follows that *Socrates* is essentially human, but not that his *body* is essentially human. For them, the body could have been something else as well, a corpse perhaps. Accordingly, they distinguish two kinds of predication: *species predication* and *predication of the form*. Suppose (1) and (2) are each true:

1. Socrates is human.
2. This body is human.

Appearances notwithstanding, the same item is not predicated in each claim. In fact, (1) and (2) are true *only because* what is predicated in (1) is the species, and in (2) the form. The point I wish to make here is that for these scholars, the species is something like a logical concept with a role in classification and a foundation in reality—the substantial form. But for them the species or essence is not a constituent of the substance like the substantial form. Contrary to my claim, they do not take the essence to be a proper part of the substance itself.

Let us lay out a more complete picture of how I view Scotus' account of a material substance's structure. Recall our schema from chapter one:

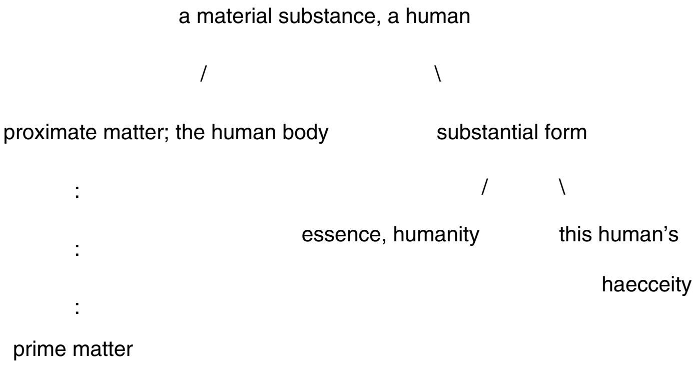


FIGURE 2.1 The structure of material substance for Scotus

Each solid line indicates a relation between a proper part and a whole, where what is on top is the whole. The dotted line between proximate and prime matter indicates that prime matter is a proper part of proximate matter only by the transitivity of the "part of" relation. This picture is over-simplified. The only mereological atom that I mean to appear on it is the haecceity, the simple entity that serves as a cause of individuation in Scotus' ontology. In particular, the prime matter should not be taken as atomic.

Both the essence and the prime matter are complex wholes with proper parts. Although Figure 2.1 does not exactly represent the full complexity of material substance for Scotus,[67] the diagram gives an accurate enough picture of the structure of a material substance for our purposes. Note that in this picture, each material substance of a kind, for Scotus, shares exactly the same essence. That is, the same essence is a proper part of each substantial form belonging to every substance of that kind. Graphically, we might represent the situation in simple terms as in Figure 2.3.

Joe and Jill have the essence "human" as a shared proper part. Likewise, the prime matter that is a proper part of Joe's body and the prime matter that is a proper part of Jill's body share a common proper part, which we might call their materiality, the nature of matter as such:

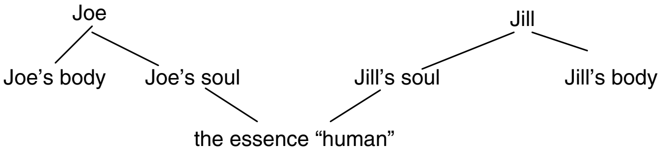


FIGURE 2.2 How Joe and Jill Share the Essence "Human"

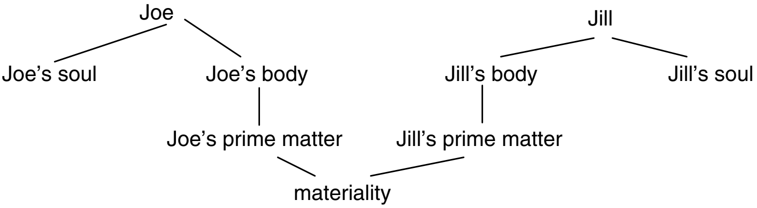


FIGURE 2.3 How Joe and Jill Share their Materiality

The natures humanity and materiality differ from each other. As natures, they are disjoint and do not overlap. The nature of materiality does not depend on humanity for being what it is, and the nature of humanity does not depend on materiality for being what it is. Neither is essential to the other, in the sense that neither has the other as a proper part. Inasmuch as neither is essential to the other, it follows that neither is necessary to the other: materiality is what it is apart from the presence of humanity, and humanity is what it is apart from the presence of materiality.

I contend that Scotus *could* hold that these natures convey this indifference to their particular wholes. We might see indifference follow from the natures in question like, to use Scotus' term, a *proprium* or necessary property. Any particular case of prime matter must contain materiality as a proper part, and must be a particularization of that nature, or rather a particular material entity: a chunk of prime matter. Likewise with any particular form of a kind; it must be a particular of its kind and not some other kind or no kind at all.

Scotus could hold that materiality conveys a necessary property of indifference to humanity to particular instances of prime matter. Thus, every particular chunk of prime matter would have a generic indifference to humanity as a kind. It would not just be separable from this soul, but *from anything of the kind "substantial form"*. Thus, the generic indifference need not be inferred from the fact that the particular bit of prime matter is separable from this soul and that soul. The general indifference of prime matter to soul arises from their natures or essences.

Indeed, the same could be said for prime matter in relation to any form—there is nothing special here in the argument about humanity and human souls. Scotus would need to hold that prime matter is indifferent to substantial form as such: that materiality is disjoint from the nature "substance." He may do this because prime matter of itself is not a substance. Recall that Scotus posited prime matter as a substratum for the generation of substances. To fill that role, it could not itself be a substance. Thus, taken in precision and considered of itself, this chunk of prime matter does not depend on a substantial form for being what it is because although it has internal complexity, it is not a substance and does not have a substantial form as a component. It follows that this prime matter has a generic indifference to form as such.

My response to Cross could be put in more formal terms in order to bring out how it can be made to address worries about the validity of Scotus' reasoning. I have argued that an indifference to forms is of the nature of prime matter. It follows that the contingency of a form to prime matter is itself necessary, or, in terms of the explanation offered above,

> (D) Necessarily, the prime matter is contingently related to Joe's soul, and necessarily the prime matter is contingently related to Jane's soul, and necessarily, the prime matter is contingently related to Fluffy the cat's soul, and . . .

Let the following lexicon be given:

Rxy: x is related to y
p: the prime matter
j: Joe's soul
a: Jane's soul
f: Fluffy the cat's soul

Suppose we infer (E) from (D), as (D) implies (E), namely:

> Necessarily, the prime matter could fail to be related to Joe's soul, and necessarily the prime matter could fail to be related to Jane's soul, and necessarily the prime matter could fail to be related to Fluffy the cat's soul.

With the lexicon, we may formalize (E) in the modal system T thus:

(F) [] <>– Rpj & []<>–Rpa & []<>–Rpf

From (F) it follows by transformations of the modal operators and negation that

(G) –<>[]Rpj & –<>[]Rpa & –<>[]Rpf.

And from (G) it follows in T that

(H) <>–(Rpj & Rpa & Rpf).[68]

That is, we may infer from (G) in T that it may fail to be that the prime matter is related to any of these: Joes' soul, Jane's soul, and Fluffy's soul. The list could be extended indefinitely to cover all particular forms available to be unified with the prime matter. That is, the same type of argument would work with an extended list. It follows that Scotus may indeed pass without invalidity from what we called a distributive contingent relation between prime matter and form to a collective contingent relation between prime matter and form.

Although Scotus' argument for the real distinction of matter from form can be construed as fallacious, that is not a telling objection against it. As we have seen, there is another way to construe his reasoning that does not commit the fallacy. Picturing material substance as a whole composed of proper parts, and in particular, *essences* as proper parts, we have found a way in which Scotus can make a valid argument for the real distinction of prime matter from form.

Chapter 3

Substantial Natures: Neither Singular Nor Universal, but Common

According to Scotus, the natures of material substances are *neither* universal *nor* singular. I am leaving aside pressing questions about the natures of accidents, such as whether they are universal or singular. Thus, I am not concerned with whether—for instance—redness is a universal, supposing the color red were an accident with a nature. A contemporary realist about universals might argue along these lines:

1. The rose is red, the sunset is red, and the blood is red. Thus,
2. there is a color, red, that the rose, sunset and blood have in common.

Or a contemporary nominalist might argue that this inference, and others of its type, do not follow. That debate is not directly our concern. Scotus is concerned rather with inferences roughly such as this:

1'. Jack is human, Jill is human, and Sally is human. Thus,
2'. there is some nature, humanity, that Jack, Jill, and Sally have in common.

Being human and being red, for Scotus, differ with respect to the sense of "being"; or: "is" in (1) is not univocal with "is" in (1'). That may seem utterly bewildering; surely, one may substitute "human" and "red" for each other above, *salva veritate.*

I think Scotus would say "No." To begin to get at why, I underlined "have" in (2) and (2') above. In (2) "have" is unobjectionable. On the one hand there is an item like a rose, sunset, or some blood, and on the other hand there is a feature, being red, that the items have but from which they are distinct; for example, they might have lacked those features. Thus, the rose is red roughly in a way I *have* a suntan; in each case the color was once not there, and will soon fade. However, it does not make sense, according to Scotus, to say in the same way that Jill *has* her humanity. For unlike the red color of the rose, humanity is not a feature Jill could have lacked. Unlike the rose, she is not a distinct item apart from her feature, in her case humanity—apart from her humanity she could not exist at all. We may put the difference by saying she does not *have* humanity; rather, she *is* human. Thus, (2') is phrased in a confusing way; it would have been better to have written (2") instead:

> There is some nature, humanity, which Jack, Jill, and Sally *are* in common.

For an x to be y is for y to be an essential nature and a proper part of x, but for x to have y it is necessary for x to be a substance and for x and y each to be co-ordinate proper parts of a whole. It is enough for our purposes to have marked the difference. Talking about substantial natures, Scotus is not asking whether there is some feature that a given group of substances has in common, as tempting as it may be to think in that way. He is instead asking about *what they*—Jack, Jill, and Sally—*are*, whether what they are is common between them.

Furthermore, Scotus notes that substantial natures have their own unity apart from the intellect. Substantial natures are not merely universal concepts whose unity is produced by an intellect conceiving them. His use of "unity" here may be strange; he is conceiving of universality and singularity as types of unity, with singularity being a greater unity than that of universality. Francis is just a dog, a German Shepherd; she counts as a singular item, and she comes with a certain type of unity, singularity. The universal "dog", however, is not—and cannot be—a singular item. Being a universal, it is capable of being multiply located, spread out as it were: here is a dog, Francis, over there is another dog, Rex, and across the street is that nasty little Chihuahua, Snapper. The universal is located at each singular dog's location. It comes as no surprise that there are so many dogs in the neighborhood, but it would come as a great surprise if they were all

Francis. Francis just cannot be spread out like that. Thus, for any two items x and y, if x is singular and y is universal, the unity of x is greater than that of y. Roughly put, Scotus' idea seems to be that y is the type of item that may be "spread out" in a way that x may not. That is y may be located in disjoint places at any times t1 and t2, for example, at the same time, but not x. With y being capable of being spread out more than x, y's unity is less than that of x.

The unity of a substantial nature (such as dog) is real and intermediate between being universal and being singular; Scotus calls the latter unity *lesser unity* or *community*. Hence "common nature" refers just to substantial natures with their intermediate unity, a unity not so indifferent as that of universals, nor so particular as that of singular individuals.

Scotus was not the first to adopt common natures as a *tertium via*; Avicenna and Aquinas preceded him. Scotus explicitly refers back to Avicenna:

> However, the way in which this can be understood, can be seen well enough through the saying of Avicenna, in *Metaphysics* V, where he says "Equinity is only equinity. Of itself it is neither one nor several, neither universal nor particular."[1]

Scotus agrees with Avicenna's negative results.[2] However, Avicenna accorded *no* proper unity to natures of themselves. He reasoned that the natures of themselves could not be either universal or singular; these were the only available types of unity—he saw no other alternative.[3] Yet even though the nature of itself had no proper unity, still, as it was not simply nothing at all, but rather a "metaphysical building block" (Spade's suggestion) in the structure of substances, the nature had *some* entity of its own. A nature at least has its essential constituents: "rational" and "animal" for the nature "man." If the nature "man" had no entity at all, it could not have any essential constituents—having anything at all presupposes that the item in question exists. Thus, for Avicenna, natures of themselves were entities without unity, but with "lesser entity," being never articulated in the nature of itself with unity.[4]

Thus Avicenna assumes what Scotus goes to lengths to deny, namely that whatever has unity is either singular or universal. Avicenna is strict, denying a nature unity if it is neither singular nor universal, whereas Scotus treats the disjunction “singular or else universal” as false: a nature of itself can have neither type of unity, and still have another type of unity. Moreover, Avicenna evidently denies the convertibility of unity and being, That is, for Avicenna it is false that whatever exists is one or has unity. Thus, he is able to assert an entity without unity.

Aquinas and Scotus, believing in the convertibility of unity and being, deny that the common nature can have being without having entity. Aquinas’ solution, in brief, was to reject both being and unity on the part of the common nature of itself: a nature of itself is without either any proper unity or any entity. As Spade and Owens attest, anyone holding to common natures, who was dissatisfied with Avicenna’s solution had only two choices:

1. Agree with Avicenna that natures of themselves have no unity, and then go on to deny them being, in accord with the convertibility rule (Aquinas).
2. Disagree with Avicenna—assert that natures of themselves have unity. It follows, from the convertibility of being and unity, that they have being as well (Scotus).

Adopting alternative (2), Scotus goes further than Avicenna and Aquinas, announcing that the nature of itself has its own entity and unity. From his principal arguments, A1 and A2, Scotus holds that the nature of itself has some unity less than numerical unity, and greater than universality, and that it also has its own proper entity. The contrast between the positions of Scotus, Aquinas, and Avicenna is depicted in Figure 3.1 below:

	Avicenna	Thomas Aquinas	Duns Scotus
Does the common nature of itself have *unity*?	No	No	Yes
Does the common nature of itself have *entity*?	Yes	No	Yes

FIGURE 3.1 Avicenna, Aquinas, and Scotus on the Unity and Entity of Common Natures of Themselves

Let us recapitulate earlier notes on the structure of material substances according to Scotus. We should be clear on just what common natures or essences are as opposed to singular forms. He believes that substantial *natures* are not substantial *forms*, but rather proper constituents of substantial forms.[5] Scotus calls the substantial form *forma partialis*, or the form of the part; it is one of the essential parts, along with proximate matter, of a material substance. A substantial nature is a form of the whole, *forma totalis*; it is the quiddity or essence of the entire material substance.[6] Scotus distinguishes a substance's form and its essence; it is only the essence to which I refer with "substantial nature." Scotus uses "nature" alone—I add "substantial" to stress that here we will leave accidents aside.

I Scotus' Natures

A. Scotus' Notion of Community

Although the nature is neither universal nor singular of itself, "[i]t is never really without some one of these features." The nature is always either singular outside the intellect or else universal inside the intellect. It is never without singularity or universality. It follows that the nature of itself does not actually exist apart from all intellects and singulars: if there were neither intellects nor singulars, there would be no common natures.

As the common nature has no separate actual existence, it cannot be a Platonic Idea. Being a universal in act requires a greater indifference and a lesser unity than that of which a common nature is capable. Scotus holds that an actual universal can only exist in the intellect. It cannot exist in singulars, and cannot exist on its own, separate from singulars and outside the intellect. The basic intuition behind Scotus' objection to the universality of substantial natures is expressed in his use of what we now call the *idion* argument from *Metaphysics* VII.13:

> the Philosopher argues against Plato that "the substance of anything whatever is proper to what it belongs to, and is not in anything else." Therefore a material substance from its nature, disregarding everything else, is proper to what it belongs in, so that from its

> nature it is unable to be in anything else; therefore from its nature it is individual.[7]

Let us leave Aristotle's intent at 1038b10–11, where he poses the *idion* argument aside for the moment: exactly what Aristotle intends is a manner of intense controversy. For now, the important point is that Scotus follows Aristotle in rejecting natures as Platonic Ideas.

B. Scotus' Arguments for Natures Having Unity Less than Numerical Unity

The opening arguments affirming and denying the question in Scotus' *Ord.* II.3.1.1, *Is a material substance individual or singular from itself—that is, from its nature,* bring out into the open two assumptions that Scotus maintains together. On the one hand the affirmative side, holding that substantial natures are individual of themselves, is right to deny that a substantial nature could be actually universal in reality. On the other hand, the negative side is right to deny that substantial natures can be individual of themselves. Scotus' answer is constrained by (1) and (2), both of which he accepts:

1. Substantial natures cannot be actually universal in reality.
2. Substantial natures cannot be individual of themselves.

Thus, the opening arguments are not to be put aside when considering Scotus' answer. But it might seem that the attempt to come up with a theory of natures respecting the claims of (1) and (2) is hopeless. For it may seem that (1) and (2) together imply a contradiction, assuming

3. Substantial natures of themselves are either actually universal in reality or individual.

Both the affirmative and negative sides accept (3); Scotus, providing his answer, avoids contradiction by denying (3).

In Chapter 1, we saw Scotus believed that the substantial form of a substance is individual. One who identifies the substantial *form* with the substantial *nature* may be motivated to take the position set up by the affirmative side, that substantial natures cannot be actually universal in reality. On the other hand, of course, one who accepts that substantial *forms* are individual, but holds that substantial *natures* cannot be actually individual, has a motive for distinguishing substantial forms and natures. Scotus, holding that substantial forms are individual, and maintaining (2) above, makes just such a distinction between form and nature.

Considering Scotus' case for a real unity less than numerical unity, we should make of use the initial arguments for the negative side, as they imply a conclusion that Scotus accepts, namely (2). Holding (2), and that substantial natures must have some unity of themselves, Scotus may infer that they have a unity of themselves less than numerical unity, which is just what he wishes to establish. My attitude toward the initial negative arguments differs from that of several other commentators, who see Scotus as arguing for the lesser unity of natures only later, at *Ord.* II.3.1.1.7–28. I go even further: the initial negative arguments are his principal ones, and the later arguments serve to confirm his position. They point out a consequence of denying common natures which Scotus takes pains to emphasize: without real community, real items of a kind—whatever that kind is—whether "human" or the quality "magenta," are impossible.

Behind the arguments, therefore, is the intuition, attested to in untutored, ordinary experience, that there can be more than one member of certain natural kinds like *man* and *horse.* Holding that natures are individual of themselves would make such multiplicity impossible. I shall reverse the order of arguments as Scotus presents them, as I find the second one he gives to be more cogent.

A1.

1. If one of a pair of opposites, F, belongs to G from the very notion of G, then the other of the pair of opposites, F*, is incompatible with G.
2. If the nature human is of itself numerically one, then numerical multitude is incompatible with the nature human.

3. Suppose that the nature human is of itself numerically one.
4. It follows that numerical multitude would be incompatible with being human.

I intend the domain for "F," "F*," and "G" to include only attributes like being singular or being human. In A1, Scotus seems to assume that attributes have "notions," such that if an attribute F from its very notion has G, F has G necessarily, and cannot exist without having G. In this way, the notion of F is like the essence of an individual, as a human is essentially rational, in that he is necessarily rational, and cannot exist without being rational. According to (1) of (A1), as one and the same item cannot have opposites at once, if one of a pair of opposites belongs to an item from that item's very notion, the other opposite cannot belong to that item. (2) is an instance of (1), with "numerically one" in for "F," "numerical multitude" in for "F*," and "the nature human" in for "G." Numerical multitude, the feature of being a plurality, is assumed to be opposite to numerical singularity.

Premise (3) is adopted for the sake of argument; A1 is supposed to show that (3) is false. (4), following from (2) and (3) by *modus ponens*, is assumed by Scotus to be obviously false. It is evident from untutored, ordinary experience that

5. There are many different humans.

From (5), it follows that

6. Numerical multitude is compatible with the nature human.

Premises (4) and (6) contradict each other. Any theory on which (5) is denied has a strong presumption of being false. Such a theory should explain at least how it is that ordinary experience could be wrong in finding many different human beings. Given (4) follows from (2) and (3), we are to reject (3), as (2) is an instance of a plausible principle, (1). Thus human nature is not numerically one (i.e. singular).

Scotus' second initial negative argument is much like A1:

A2.

1. For any F and G, if F is in G *per se*, F is in every instance of G.
2. Suppose that being individual belonged of itself to the nature human.
3. If being individual belonged of itself to the nature human, then whatever the nature human is in, that nature is "this human."
4. It is absurd that whatever the nature human is in, that nature is "this human."

Premise (1) is plausible; it says that if some nature, G, is such that of itself it contains F, then F is universally in every G: whatever G belongs to, F must belong to it as well. Premise (2) is accepted for the sake of argument: it is the opponent's assumption, and A2 is supposed to show how (2) implies absurdity, and should be denied. Premise (3) is an instance of (1), with "being individual" in for "F" and "the nature human" in for "G." If the nature human of itself must be singular, it cannot exist in anything without being individual. The conclusion, (4), claims that it is absurd that the nature human is individual in whatever it belongs to, that whatever "human" is in, it would still be the nature "this human." Evidently, Scotus takes assumption 2 to imply that the nature human would be exactly the same individual in whatever it belongs to.[8]

Succinctly put, the basic thrust of the argument is as follows: why cannot one and the same nature, of itself individual, belong to whatever is human? Because then there could be only one human—absurd. In fleshing out the argument, Scotus seems to have made a number of tacit assumptions:

5. There are many different human beings.
6. There are not many different human beings if each human must have exactly the same individual nature.

Premise (6) claims that there cannot be many humans if each has the same individual nature. For a substance's nature bears a special "relation" to it, namely, the relation of being the *substance of* the thing.

To say many distinct individual things share the same substance implies that they are really the same substance, and not many substances, contrary to appearances. That contradicts the manifest evidence of ordinary experience.

Neither of the initial negative arguments is demonstrative in force, of course. They leave it open for a convinced nominalist to deny ordinary experience, and to insist that another theoretical picture is preferable. Perhaps a nominalist can satisfy the needs of ordinary experience (in everyday classifying, categorization, etc.) by claiming individuals thought to be in a species might really just be members of a natural class, or they really might be qualitatively similar without being the same. Now we turn to the two principal arguments Scotus himself advances for his position.

Scotus' Principal Arguments

B1. Scotus' First Principal Argument, from Knowledge

Scotus' first principal argument for the thesis that natures are not singular of themselves works from considerations about human intellectual understanding. Here he considers only knowledge by what he calls "abstractive cognition." Abstractive cognition takes as its object a nature, and may yield knowledge even if there is actually nothing to which the nature belongs. Scotus allows for another type of knowledge by intuitive cognition, which is direct intellectual knowledge of a singular apart from consideration of its nature. He leaves that type of cognition aside, as he believes it is not naturally open to us in this life.

Argument A3

Scotus' argument takes the form of a reductio of (3) below:

1. An object as such is naturally prior to the act of cognition itself.
2. The intellect understands that object under the aspect of a universal.

3. Assume for the sake of argument that the object in its naturally prior state is numerically singular of itself.
4. It follows that the intellect understands that object under an aspect opposite the object's notion.

Premises (1) and (2) are held by both Scotus and his opponent. They share them as part of their intellectual background. For instance, the nature of Socrates is understood by abstractive cognition under the aspect of a universal, "human." Moreover, according to its notion, it can be predicated of different numerical singulars in univocal predications, such as "Socrates is human" and "Plato is human."

Premise (3) is the contention of Scotus' opponent. Note, the opponent holds not just that the object of knowledge, such as the nature of Socrates, is numerically singular, but that it is numerically singular *of itself*. From (1)–(3), Scotus infers (4). He tacitly assumes (4) is sufficient to imply that (3) is false, as knowledge of a nature by abstractive cognition would be impossible if the intellect understands the nature under an aspect, universality, opposite to its notion, singularity.

Why is that? It might be tempting to reply to Scotus: although the nature of Socrates is numerically singular, it is potentially universal. Thus, it can be understood by the intellect when its potential universality is actualized. The same nature can be actually singular in Socrates and actually universal in an intellect.

That reply misses the point of A3. Since the nature in Socrates is numerically singular of itself, of itself it is not indifferent to other numerically singular individuals. Yet to be universal is just to be in such an indifference. The nature in Socrates is incapable of being in the intellect, as it would have to be indifferent, and yet cannot be indifferent. The result is that whatever is in the intellect when the nature of Socrates is understood must be primarily diverse from that nature. Yet the object of abstractive cognition must be received in the intellect, if it is to be understood. Thus, intellectual understanding of Socrates' nature is impossible if that nature is numerically singular of itself. As nothing unique to Socrates' nature is required by the argument, the point generalizes to include any nature.

B2. Scotus' Second Principal Argument for the Community of Natures

Scotus' main argument for the community of natures, which I shall call A4 (see below where I set A4 out explicitly), is a valid instance of *modus ponens.* Scotus argues for both premises, but, as he should, he does more work supporting (2): he purports to show, in seven sub-arguments, that there is some unity less than numerical unity. That is, of course, what we should wish to see proven, namely, that *there are* real beings with less than numerical unity.

Argument A4:

1. Anything with a real, proper, and sufficient unity less than numerical unity is not of itself one by numerical unity.
2. The proper, real, and sufficient unity of the nature existing in this stone is less than numerical unity.
3. Thus, the nature existing in this stone is not of itself one by numerical unity.

A4 is Scotus' most cogent explicit argument for the community of natures. I say "explicit" because I find another cogent argument implicit in his writing from the reality of libertarian human freedom, an argument which I shall present only after we have seen what Scotus explicitly argued. I see no objection to premise (1) and the inference from both (1) and (2) to (3); his reasoning for (2) is convincing inasmuch as in denying it his opponent would be forced to take a position that is difficult to defend.

Discussion of Premise (1)

Behind premise (1) is Scotus' conviction that nothing can both have and lack the ability to go with many things. First, I shall briefly explain "real, proper, and sufficient unity." "Real" is meant to contrast with rational or mental: a real unity is neither a unity somehow conferred by an intellectual operation nor a unity that is merely a fiction produced by an intellect. Being mere fictions, Shakespeare's Iago and McCarthy's Judge Holden lack real unity, whereas Shakespeare and McCarthy had the genuine article. A real unity belongs to a thing apart from any operation of a finite intellect.

"Sufficient unity" is unity not required for the actual existence of an item, but unity, which, if possessed by an item, implies that it actually exists. Perhaps a thing may actually exist with either of two degrees of unity. A thing cannot exist unless it has at least one variety of sufficient unity available to it, but does not need to have its sufficient unity from its essence: the sufficient unity a thing actually has may be accidental to it. We shall find that there are three grades of unity each sufficient for the existence of a nature, namely those of universality, community, and singularity. Two of these, community and singularity, are real unities, and only one, community, is a proper unity.

"Proper unity" concerns the unity that follows from a thing's nature. I suspect Scotus uses "proper," as in "the proper F" where F is some feature of a being, to indicate that F is a property of the entity to which it belongs. A property or *proprium*, following Porphyry, is a necessary accident.[9] Scotus, having written an early commentary on the *Isagoge*, would have had an intimate familiarity with the term "property." A property in Porphyry's sense follows from what a thing is, from its essence, and it necessarily belongs to its bearer. For instance, hinnibility, the power to whinny, is a property of horses and belongs necessarily to horses.

Sine dubio, this is a more restricted sense of "property" than that found in twenty-first- century metaphysics. A property in the modern sense, like being the President of the United States or sitting down, need not be necessary: a man can survive standing up after losing his re-election bid. I mean to suggest, then, that "being able to go with many things" and "being unable to go with many things" are *propria*, features a being necessarily has given the kind of being it is. An item with real, sufficient, proper unity actually exists apart from any operation of a finite intellect with a unity that is necessary to it, following from the thing's essence.

According to (1), the real, proper, and sufficient unity of an item may constrain the unity it can have of itself. The locution "X of itself" for any item X indicates X taken alone, apart from any whole in which X may be a proper part, and apart from any relation in which X may stand; X of itself is X by itself. Thus, given the real, proper, and sufficient unity of a nature, N, the unity N has of itself may be constrained. In particular, according to (1), if the real, proper, and sufficient unity of N is a unity less than numerical unity, then N of itself cannot have a greater unity, namely numerical unity.

Why is that? For the sake of argument, consider a nature N of itself with numerical unity, yet with a real proper and sufficient unity less than numerical unity. Since it has numerical unity of itself, then it is incompatible with N for N to belong to each one of many. But N of itself retains its proper unity. Taken of itself, there is nothing N belongs to or is related to that could prevent N from retaining its proper unity. Yet as the proper unity necessary to N is less than numerical unity, and compatibility with belonging to many follows on having a proper unity less than numerical unity, it follows for N of itself that it is compatible with N that N belongs to each of many. Thus, absurdly, N of itself both can and cannot belong to each of many.

Discussion of Premise (2)

In (2), Scotus asserts that the proper, real, and sufficient unity of the nature existing in this stone is less than numerical unity. Any other nature of a material substance could work as well as "stone" in (2). He argues for (2) by a *reductio,* assuming that in fact there is nothing with a unity less than numerical unity. We should expect him to have started from the hypothesis that in fact there are no natures with a unity less than numerical unity. For if he carries through his reductio merely by showing that something other than a nature has a unity less than numerical unity, he will not have shown (2). Indeed, not all of his arguments in support of (2) conclude that there is a nature with a proper, real, and sufficient unity less than numerical unity. Perhaps by supplying such arguments he meant to address critics who ruled out community across the board. He might intend to shift the burden of proof to the opponent who denies that natures of themselves are singular with numerical unity. Scotus may intend to say, in effect, "If there are cases of community in things other than natures, why should there be no cases of community among natures?"

First, I present Scotus' strongest argument for (2), the argument from real similarity, the sixth in the list of seven that Scotus gives. The basic intuition behind the argument, A2, is that Socrates and Plato, the two human philosophers, are really more alike than Socrates and a line. "Really" here means "apart from any finite mental operation," the idea being that we do not *make* the real similarity between Socrates and Plato that is missing between Socrates and a line. The real similarity is not merely conceptual, or cultural. Rather, given those three (Socrates, Plato, and a line), apart from any act of a finite intellect, it is true that Socrates is more like Plato than the line; the similarity relation follows on the existence of the things alone. Scotus claims that one who denies that there is a unity less than numerical unity is committed to denying real similarity.

Argument A2 proceeds in this way:

1. Assume for the sake of argument that every real unity is numerical.
2. It follows that every real diversity is numerical.
3. However, not every real diversity is numerical.
4. Thus, not every real unity is numerical.

Scotus believes his opponent is committed to premise (1), having held that there is no real unity less than numerical unity. There is some question, noted above, about whether this is too strong a commitment for Scotus' opponent—should not (1) read "Assume for the sake of argument that the real unity of every nature is numerical?" Let us bypass that question for the moment and return to (A2).

Scotus infers (2) from (1). The terms "diverse" and "same" are correlatives. If "same" is used in a certain sense, such as "Plato and Socrates are the same in species," then its correlative, "diverse" may be used in that sense as well. It follows that for each kind of unity there is a correlative kind of diversity. Given that (1) admits the existence of numerical unity, it follows that there is numerical diversity. Socrates is a numerical unity; thus, we may say he is numerically diverse from Plato. That is, each of them is a numerical unity, and each is not the other.

According to (3), (2) has a number of unacceptable implications:

(i) If each thing were only numerically diverse from every other thing, all things would be equally distinct from each other. In that case, every universal would be fictitious: there would be no basis in things for the intellect to abstract anything more common from between any two things, x and y, and x and any third, z.

This problem captures Scotus' basic difficulty with (1); let x be Socrates, y be Plato, and z be a line.

ii) If the only real unity is numerical unity, then any real unity in a thing is numerical unity. For any two real items, x and y, they will be primarily diverse, sharing nothing real in common. For any part s of x and any part t of y, s and t will be numerically diverse.

That is to say, things differ all the way through. Nothing real in any one item, x, is shared by it with any other numerically distinct item, y. No matter how similar any two numerically distinct things are, such as Socrates and Plato, they have nothing real in common.

To bring out the absurdity of (i) and (ii), I believe, Scotus makes a further point, which can be put as argument, A3:

> It is also confirmed by the fact that numerical diversity is for this singular not to be that singular, assuming the being of each extreme. But such a unity necessarily belongs to the other extreme.[10]

Argument A3:

1. For x and y to be numerically diverse is for each to be singular, to exist, and not to be the other.
2. Suppose a and b are numerically diverse from each other.
3. Each has a unity such that it is singular, exists, and is not the other, namely numerical unity.
4. Thus, a and b are not numerically diverse in this, the fact that each has the same type of unity, numerical unity.

The consequences of A2, namely (i) and (ii), picture the world as containing nothing except what is numerically singular and no pairs or n-tuples of things except those that are numerically diverse from each other. With A3, I believe Scotus argues that such a picture is self-refuting. Any pair of numerically diverse things cannot be primarily diverse from each other, or different all the way through, as (i) and (ii) imply, as they will at least have their type of unity in common. It follows that (1) in A2, which claimed that every real unity is numerical, is false. We should admit that there is some real unity that is not numerical, which is to say, a real unity that is less than numerical, as there is no unity greater than numerical unity relevant here.

Is A3 cogent? The point in (4) of A3 is that the numerical unity of a and of b is something they somehow share, as wholly present to each at once. The intellect can abstract from numerically different individuals a concept of individuality, say "being numerically one," predicable univocally of each individual with numerical unity. This concept will be a universal. However, there are pluralities of individuals each with numerical unity in the world pictured by (i) and (ii), whose members do not themselves compose an individual with numerical unity. Say one such group consists of Plato and Socrates. These individuals are not each proper parts of a whole, Meta-man, which in turn is an individual with numerical unity. On the contrary, they are numerically diverse. It follows that any two numerically singular individuals, like Socrates and Plato, are more similar than either is to a plurality of numerically singular individuals whose members do not themselves make up an individual with numerical unity. Therefore, the intellect may abstract from Socrates and Plato the universal "individual," whereas it does not from two pluralities. In fact, A3 has the function of pointing out that we in fact do have a universal concept of individuality, and that this concept is not a mere fiction.

However, if the intellect can infer real similarity between individuals, it follows that consequence (i) is false. According to (i), all things are equally distinct from each other. However, with A3, we saw that not all things are equally distinct from each other. Mere pluralities differ more from individuals than individuals differ from each other. As consequence (i) is false, it follows that (3) is true: not every real diversity is numerical. It follows that not every real unity is numerical. Thus, there is a unity less than numerical unity.

Suppose someone resists the point, and maintains instead that there is no shared or common sense of "numerical unity" or "being one." However, such an objection comes with a high price tag. The objector must maintain that there is no single way that many things can be when they are numerically one. Indeed, "numerically one" is equivocal. Exactly one being can be numerically one, and nothing else can. But then, what will anything else be? Certainly not numerically one. Perhaps numerically many? Or simply plural? Indeed, contemporary metaphysicians of Armstrong's caliber (although he is a realist; let us ignore that for the moment) maintain that physical things, for all we know, have an infinite "downward" complexity.

Wherever we find one item, it may be for all we know a plurality in fact. But the nominalist here is committed to something worse; he *must* deny pluralities as well, for any plurality is only plural because it is made up of components, each of which is numerically one. A strict nominalist then is driven to accepting nihilism about any real pluralities, and any numerical unities besides one. It follows that the strict nominalist, denying the real unity less than numerical unity, is driven to the extreme of accepting something like the Parmenidean One, or the singular Reality of Advaita Vedanta, if he accepts anything real and one at all. Surely *that* is a high cost for denying the real unity less than numerical unity.

Armstrong avoids the problem: he allows a univocal supervenience relation, according to which one thing can supervene on many making up a subvenient base. But Armstrong accepts universals as well. A strict nominalist can admit neither the relation, nor the univocal use of "one" for that which supervenes. I submit that the price for a strict nominalism is just too high; we should accept the real unity less than numerical unity.

B3. More Support: From Real Contrariety

Scotus has other interesting arguments for the thesis that there is a real unity less than numerical unity. I would like to look at two more promising candidates. One starts from the fact of *real opposition* in nature. Scotus has in mind the color qualities, black and white. These are really opposed to each other in the sense that, apart from any act of a finite intellect, nothing can be both black and white in exactly the same respects. If item x is black at time t, and cause c will bring it about that x is white at t + 1, the color black must "withdraw" from x; x must cease being black when it begins to be white. He writes,

> But contrariety is a real opposition. This is clear, because one contrary really destroys the other, even disregarding any operation of the intellect.[11]

There is problem with his example: we are no longer so certain that colors are absolute qualities independent of finite intellects.

Perhaps many have Cartesian-style sympathies with the notion that there are no real colors in the world like qualities inhering in their subjects, even if there are real dispositions in external things to produce color sensations in us, *via* our sense organs and other parts of our bodies. The black/white opposition hardly seems "real," as Scotus requires.

But that difficulty is certainly not fatal to the argument. There are other oppositions in nature, unknown to Scotus, but revealed by scientific theory. I (tentatively) suggest the opposition between positive and negative charge. No item can be both positively and negatively charged in exactly the same respects, and this opposition is independent, at least for the most part, of any operations of our finite intellects. Hence, we have an example of the type of phenomenon Scotus was talking about.

Scotus goes on, "each primary extreme of this opposition is real and one by some real unity. But not a numerical unity."[12] Each charge in our example is one charge, apart from any operation of a finite intellect. But the unity possessed by the charge cannot be numerical unity, since if it were, "there would be as many primary contrarieties as there are individuals."[13] Each charge would be a numerically singular individual. There would be no general real opposition between types of charges, as there would be as many charges as there were numerically singular items, none more similar than another to any third, since none of them share anything real in common. Scotus takes that result to be absurd. The phenomenon of contrary opposition requires that the contraries on each side of the opposition really share something: the positive charge of one particle is really the same as that of another.

B4. Measure Argument

Scotus gives an argument from the primary measure in a genus in each of his treatments of the theory of common natures. I fear it is not an argument likely to appeal to contemporary metaphysicians, yet it is of historical interest, and no clear interpretation of it has appeared yet in the secondary literature. I shall present an interpretation; it will be speculative, in the sense that not everything I say on

Scotus' behalf has support from his texts. Although Scotus presents the argument as if it applied generally to every genus, I suggest we take it to apply to the genus animal, where his intent is clearer. I shall go over each section of Scotus' text extracted below, explaining what he means, and assessing the cogency of his reasoning afterwards:

Measure Argument: (MA)

[A]

According to the Philosopher, *Metaphysics* X. [1, 1052b18], "In every genus there is something one and primary that is the metric and measure of all that are in that genus."

[B]

This unity of what first measures is a real unity . . .. Therefore, it is real, because what are measured are real and are really measured. But a real being cannot be really measured by a being of reason. Therefore, this unity is real.

[C]

But this real unity is not numerical, because in a genus there is no singular that is the measure of all that are in that genus.

The members of a genus Scotus refers to in [A] are species. He means that in every genus, there is some species that is primary among all the species in that genus. We could look at a genus as marking off a proper activity, like sensing or being alive, and a range of possible ways in which that operation can be carried out. Each way in which the generic activity can be carried out represents a species immediately under the genus. Each species marks off a proper operation that is one way among others of carrying out the generic operation. The species human and canine each mark out a proper operation unique to the species, in which the generic operation is carried out: the human activity of understanding, involving sensation, the canine activity of sensing, which does not involve an intellect.

These species under a genus are ordered into a sequence according to the proper act they mark off. These acts more or less completely actualize the range of possibility that the genus marks off. For instance, the human activity of sensing involves the intellect, experience, memory, and sense perception.

II Are Common Natures Platonic Forms?

We should take up and resolve two problems having to do with the entity of a common nature itself and the nature's natural priority both to the haecceity and the whole which they compose. First, it seems that Scotus is committed to Platonism about common natures, despite his avowals to the contrary. If the common nature has its own proper unity and entity, and can exist apart from the substance of which it is a component, it seems to follow that even if no singular instances of a nature exist, the nature of itself could exist. That is, common natures seem be transcendent in just the way Platonic Forms are transcendent. Second, even supposing that Scotus succeeds in explaining why he is not committed to Platonism, he still should explain how a common nature can have a certain feature of itself that follows on its proper entity, such as indifference, even though the common nature of itself cannot ever actually exist according to its proper entity.

Scotus includes Platonism about natures under the heading of "inconsistencies in metaphysics."[14] He writes, "Plato claimed that an Idea is a substance existing by itself, a separated nature without accidents (as is attributed to him by the Philosopher) in which there is the whole nature of the species."[15] These Ideas can be instantiated by singulars, and consequently it follows "This [singular] is this [universal]" and "yet is under this accident and that one."[16] Scotus pictures the Platonist as holding that an Idea is a universal entity that can be multiply located as a proper part in numerically distinct singulars while being wholly present in each, and capable of existing apart from each and every singular. What makes this human different from that human is just that one and the same nature appears in each thing under different accidents.[17]

What is the inconsistency in metaphysics that follows from Platonism? I take Scotus' argument to depend on a point already taken from *Metaphysics* VII.13, that no universal can be a substance, since the substance of a thing is unique to it. If this variety of Platonism held, all things of a species would have one unique substance, namely that of the multiply located universal. However, such a situation is absurd, as there can be more than one human or stone, each a unique substance different from the others of its kind.

An opponent may object that nevertheless Scotus is caught in this variety of Platonism, making the common nature a separately existing proper part of numerically distinct singulars. The opponent may appeal to Scotus' doctrine of the natural priority of the nature of itself. Scotus writes, "And insofar as it [the common nature] is *naturally prior* to that contracting aspect [the haecceity], it is not incompatible with it to be without that contracting aspect."[18] The haecceity of Socrates cannot exist without Socrates' common nature, his being human. Socrates could not exist without his common nature, and if Socrates could not exist without it, neither could his haecceity. However, the common nature "humanity" can exist without the haecceity of Socrates, as Socrates' humanity could have been the humanity of another singular, as Socrates' humanity of itself is formally the same as Plato's humanity of itself. For the nature of itself is indifferent to being contracted in this or in that singular. Thus, as the existence of the common nature is independent from that of the haecceity, whereas the existence of the haecceity is dependent on that of the common nature, the common nature is naturally prior to the haecceity.

The opponent may continue, saying that since the common nature is naturally prior to the haecceity of this singular, it follows that the common nature is also equally naturally prior to the haecceity of each other singular. Thus, just as the common nature can exist apart from the haecceity of this singular, so it can exist apart from the haecceity of any other singular. But as a common nature can exist apart from the haecceity of a singular, so it can exist apart from the singular to which the haecceity belongs. It could not exist apart from the haecceity and yet belong to the singular, since the singular cannot exist without its haecceity. Thus, the common nature may exist without this singular, and it may exist without that singular, and so on for each singular. Having made this argument, the opponent may be tempted to infer that the nature of itself can exist separately from *every* singular.

On Scotus' behalf, we should deny the opponent's last inference, and reply that it does not follow that the common nature can exist apart from every singular altogether. Yet, just that kind of total separation is necessary to the version of Platonism we have articulated. No common nature actually exists as common. Insofar as it is actual and outside the intellect, it is always singular and contracted. Thus, an actual common nature always exists with some singular or other. However, the precise singular it actually exists with does not necessarily go with the common nature. Hence, the common nature of itself is indifferent to belonging to this or that singular. This is not to say that the nature exists apart from all singulars. That is, a common nature of itself is just the type of entity that can be multiplied and wholly located in each singular to which it belongs through contraction, without losing its identity as one and the same common nature. The common nature can be this type of entity without being really separable from every singular to which it can belong.

Nor does the fact that a common nature of itself can be multiplied and wholly located as a part in each singular to which it belongs imply that the common nature of itself is a universal in the thing to which it belongs. One truly can call the common nature "potentially universal" in the singular to which it belongs, as the common nature in the singular can be understood, and it is understood as a universal in the intellect. Regardless, the common nature in the singular is not a universal in act. The common nature in the singular is actually contracted, since it composes a whole with the haecceity that is one with numerical unity. The common nature is not in act in a singular in any other way than as individuated and singular.

An opponent of Scotus' common natures may make another objection, this one aimed at the defense I have mounted on Scotus' behalf. According to my defense, the nature may retain its natural priority without actually existing separately from every singular. It follows that the nature is indifferent without actually existing according to its own proper entity. If the common nature does not actually exist according to its proper entity in the singular, and it does not actually exist separately from all singulars, then the opponent may be tempted to infer that it does not have its entity and unity apart from an act of an intellect. As a common nature has no actual existence of itself, it does not actually have what follows on its actual existence, namely indifference to singulars and universals. Thus, the opponent may claim, Scotus is wrong to assert that contracted natures are indifferent.

In reply, we should recall on Scotus' behalf that for Scotus no part that is actually a component of a whole loses its proper entity when it is composed. To the contrary, it retains its own entity and whatever follows necessarily from its own entity. The opponent apparently holds that the nature cannot retain its proper entity when part of an actual composition with the haecceity. The opponent might say that since the nature is actually contracted, it only potentially has its proper entity. However, the opponent has missed Scotus' point that community follows on a common nature's proper entity, but not necessarily. If a common nature were actually to exist apart from any singular and from any act of an intellect, it would be actually common. Community strictly speaking is *accidental* to a nature. Thus, a nature can retain its proper entity even if it is actually contracted. The actual contraction of the nature merely removes an accident without removing the actual entity of the nature. True—a nature is always necessarily disposed to actual community from its own entity, just as a glass is always necessarily fragile and disposed to shattering. But a nature's being necessarily disposed to actual community is consistent with its never actually existing with community. Just so, a glass may be fragile and disposed to break if dropped, even if it is never dropped and never breaks. Thus, a nature may have different kinds of unity, each of these kinds of unity being accidental to it, and the nature can be necessarily disposed to a certain type of unity, which nevertheless is accidental to the nature.

I suggest indifference follows on a common nature's entity necessarily, in contrast to the nature's community. A common nature, regardless of the way in which it is actually one, never loses its actual indifference. Thus, even when a common nature is contracted in this man, it is indifferent to being contracted in him, and could also be contracted to another numerically distinct man. If the common nature were not necessarily indifferent, then it would be possible that the common nature actually has some unity without indifference. However, it is absurd that the common nature actually has unity without indifference. As then it could not actually be common, the nature would have to be either actually singular without indifference, or actually universal in an intellect without the common nature's indifference. If it were actually singular without indifference, it could not be contracted to any singular other than the one to which it was actually contracted. It follows that the nature would be unintelligible, and that it would be possible, at least for material substances, for more than one thing to have a nature of a certain kind. If it were actually universal without indifference, then it could not be contracted to anything at all. It follows, contrary to what we have assumed, that the nature could not really be the substance of any singular.

A nature's indifference is compatible with the contracted nature's singularity. Indifference is not a positive feature of the whole with which the nature is composed that enters into a contradiction with the singularity of the whole singular.[19] Thus, I suggest on Scotus' behalf, although the whole's singularity is incompatible with the nature's indifference, indifference is not a feature that is passed on from the part, the nature, to the whole of which the nature is a part.

III Answering Objections to Scotus' Theory of the Common Nature

It is far from clear whether Scotus' notion of the common nature is in fact coherent. In this section I shall present and resolve what King calls *Ockham's Problem*: Given that singularity and community are opposites "[h]ow can anything have two distinct principles that make it, respectively, really individual *and* really common?"[20] Suppose that an individual has as constituents both a common nature, making it a thing of a certain kind, and a haecceity, making it singular. How can they go together to make a substance that is really one thing rather than something with no more unity than a small heap?

The problem King (1992) raises is Scotus' version of Gill (1989)'s problem of *vertical unity*.[21] Gill writes with Aristotle in mind, but the problems she raises for Aristotle about vertical unity are even more acute for Scotus. Broadly speaking, we may consider a material substance either as it exists at a moment, or as it persists and endures over time. I leave the perdurantist option aside. Considering it as it endures over time, one faces a problem of its diachronic, or as Gill says, its *horizontal unity*: how is it possible that a material substance endures and survives change? That question is to be distinguished from the question of how a material substance at a time can be a *per se* unity rather than a heap, given that it consists of a plurality of items. Here we are asking after a material substance's *vertical unity*.

Explaining vertical unity as *definable unity*, Gill writes as follows:

> An entity C is not a definable unity if, in specifying what C is, one must mention an entity B that belongs to an entity A, where A, B, and C *are distinct from one another*.[22]

For instance, say C is a composite substance, like Socrates. Being a substance, he should be a definable unity. Specifying what Socrates is, we specify his essence. His essence makes reference both to matter, such and such a body, and to form, say being human. But neither the matter nor the form play the role of B, namely something distinct from the composite substance, belonging to a third item also distinct from the composite substance. Keeping in mind the results of Chapter O1 on the real distinction and separability of matter and form in Scotus' ontology, we can see that on Gill's account of vertical unity, Scotus is in trouble.

Scotus could be given a response to King's challenge by appealing to his doctrines of formal distinction and imperfect composition, saying that one and the same thing composed of a common nature and haecceity does not actually have incompatible features. However, the appeal is seen by some as working *per obscurius*.[23] The perceived obscurity might be rooted in a suspicion that "formal distinction" is just a verbal label for what we know his theory needs, namely a certain kind of "unity-in-difference" between natures and haecceities. Is it merely a semantic maneuver, or does his formal distinction do explanatory work?[24]

For Scotus, two items are formally distinct if, apart from any act of an intellect, the items differ in that neither is included in the definition of the other, but both exist together as parts of one thing, and neither exists separately on its own. Hence Scotus writes that in a formal distinction, "one is really outside the other, formally speaking, just as if they were two things, although in a way through identity those two things are one thing."[25] The formal distinction is not merely a rational distinction, since the items distinguished differ apart from any act of an intellect. Indicating this, Scotus wrote that the realities "really differ." Further, the formal distinction is not a real distinction, as the items distinguished are not themselves real things, but only exist as parts together in a real thing. Thus, they differ only "as if" they were two things, when in fact they actually are only one thing.

Since Scotus asserts that a nature and a haecceity are really the same thing rather than two things, as the nature of Socrates and his haecceity compose one thing and do not exist apart from that thing, Ockham infers that Scotus' theory is inconsistent. Ockham writes, "if a nature and the contracting difference are not the same in all respects," a statement with which Scotus agrees, "therefore something can be truly affirmed of the one and denied of the other."[26] For instance, one truly can affirm singularity of the haecceity, and deny it of the nature of itself. However, "among creatures the same thing cannot be truly affirmed and truly denied of the same thing."[27] To do so would be to assert a contradiction, which cannot be true, according to Ockham. Thus, "they [the common nature and the haecceity] are not one thing."[28] Yet Scotus asserts that the common nature and the haecceity are really one and the same thing.

What can be said on Scotus' behalf to explain how the common nature and haecceity, being formally distinct from each other, can go together to compose one and the same thing without contradiction? The common nature as a component with the haecceity in one thing is not actually common, but only potentially common. Between actual singularity and actual community there would be a contradiction, but between the actual singularity of the haecceity, and the potential community of the common nature in the thing, there is no contradiction.[29] Scotus asserts, "'composition' can be understood either properly, as is a composition out of an actual thing and a potential thing, [for instance, between substantial form and its matter, respectively] or else less properly, as composition out of an actual reality and a potential reality in the same thing."[30] The common nature of itself and the haecceity stand to each other as a potential item to an actual item, respectively. Since the common nature and haecceity stand to each other as potency to act, they are the kind of items that can be composed into one thing. This is just a primitive fact of Scotus' metaphysics. The common nature of itself, uncomposed with a haecceity in one thing, is the potential item. Taken as it is of itself, the nature is actually common. For, as it is of itself the nature is common by its actual proper unity. Hence Scotus writes, although "the individual [the haecceity] . . . adds no reality" to what it composes, it stands to the common nature as "an act determining the reality of the species."[31]

However, when it is composed with the haecceity in one thing, the nature is not actually common. The potentially composed common nature is reduced to act by the haecceity, and this reduction to act suffices to remove the community of the nature. Reduced to act by the haecceity, the nature is contracted and actually singular, but only potentially common, for it is actually indifferent to the actual haecceity that contracts it. Thus, Scotus' theory has the resources both to answer Ockham's Problem, and to reply to Ockham's charge of inconsistency.

Yet even while composed within this thing, the common nature and the haecceity retain their distinction apart from any act of an intellect. Hence Scotus writes,

> This one [the haecceity] is formally the entity of the singularity and that one is formally the entity of the nature These two realities cannot be distinguished as 'thing' and 'thing' . . .. Rather, whether in a part or in whole, they are always formally distinct realities of the same thing.[32]

Scotus assumes that the parts of this composition do not lose their entity when composed.[33]

He calls a being in a composition a being in another. If the entity of an item in a composition were just the entity of another item, say the entity of the whole with which it is composed, then the item in the composition would have no entity of its own. It would be "nothing in itself." In that case, it could not be a part in something else, as what is nothing in itself cannot be a part.

I suggest that this reasoning applies just as well for Scotus in the case of the common nature. In order for the nature to be a reality composing some whole, it must be a being in itself, and not simply a being in another. It follows that when it is a part in an act-potency union with a haecceity, it is a being in itself, with its own entity. This should not re-introduce worries about the consistency of Scotus' theory, since the entity of the contracted nature is not actually common. However, the doctrine that the nature retains its entity in composition with the haecceity in a thing raises new problems to which we now turn in Chapter 4.

Chapter 4

On Individuation by the Haecceity

Scotus' theory of common natures leaves him with a problem of individuation to be solved on pain of incoherence: what causes the singularity of substantial forms or contracted natures, given that substantial natures of themselves are common, and neither universal nor singular? If individual humans each have a common nature as a constituent, a nature which itself is not singular with numerical unity, what makes the individuals numerically distinct substances? According to Scotus, assuming that Scipio Africanus is a human individual, he has a common nature, humanity, which of itself is neither particular, nor universal, nor actual. If Scipio were simply the same as his common nature, he would not be particular, but common. Yet Scipio is a particular human, numerically distinct from Hannibal. It follows that Scipio is not simply the same as his nature. What follows for Scipio follows in general for any material substance with a common nature. Thus, Scotus faced a peculiar version of the problem of individuation:[1] what is the cause of a material substance's individuality?

He has already conceded that a substantial nature is never without either the accidental unity of singularity, or that of universality. Given that there are substantial forms, there is a cause of their singularity. He writes, "Once community has been established in the nature itself according to its own entity and unity, one must necessarily look for the cause of singularity, which adds something over and above the nature it belongs to."[2]

Thus, Scotus' problem of individuation is to account for the singularity of substantial forms, explaining what causes the common nature to receive the accident of singularity. In other words, looking for the cause of singularity in material substances, Scotus sought an answer to the identity of a principle or cause of individuation.

In this chapter, I shall present two of Scotus' arguments for the conclusion that each substantial nature is individuated by an entity, a *haecceity,* or primitive "thisness." Concerning the first, I propose that we read Scotus' questions 2 through 6 in *Ord.* II.3.1 as, formally speaking, making a disjunctive syllogism. Thus, I attribute to his reasoning a structure that is not explicit in the texts:

A1:

1 The common nature is individuated either by negations, existence, accidents such as quantity, matter, or a haecceity.
2. It is not individuated by negations, existence, accidents, or matter.
3. Therefore, it is individuated by a haecceity.

By criticizing alternative accounts, Scotus arrives at primitive thisness as the only remaining alternative by a process of elimination. It follows that his argument is no more cogent than his list of original alternatives is complete; in effect, he presents a coherent theory of haecceities, and then argues that it is correct by eliminating the competition. The chief competition comes from Aquinas' theory of individuation by designated matter.

The second argument more closely mirrors an explicit line of reasoning in Scotus, that haecceities are needed to explain how two different individuals of a lowest species can differ. The argument runs as follows:

A2:

1. Suppose x and y are different singular substances in the same species, S.
2. It follows that x and y are different beings, yet somehow the same.
3. Their difference is not accounted for by the nature in x and the nature in y.
4. Besides the nature in x and the nature in y, there are some primarily diverse items by which x and y differ.
5. These primarily diverse items are not negations, nor accidents, and so on.

6. It follows that they are positive entities that *per se* determine the nature of that to which they belong.

The argument will be analyzed in detail below. For now, the reader should keep in mind the point of Scotus' strategy: to show that even focusing on the type of individuation that did concern Aristotle, one still needs haecceities as principles of explanation.

I Scotus' First Argument

A Negations do not individuate

One of Scotus' main predecessors, Henry of Ghent (d. 1293), provided an initial flashpoint for Scotus' thoughts on individuation. According to Henry of Ghent, creatures, including material substances, are individuated by a twofold negation.[3] Arguing on behalf of Henry's position, Scotus writes, "'one' only indicates the privation of division in itself and the privation of identity with something else."[4] According to one negation, Socrates is not anything else. The first negation singles Socrates out from among other items. According to the other negation, Socrates is not internally divided; he is not a heap of different parts. The second negation implies that what the first negation singled out is indeed a single item. The same negations suffice for the individuality of any other item ; to paraphrase what Scotus took to be Henry of Ghent's position:

> **HG:** Whatever (a) is not anything else, and (b) is not internally divided, is an individual.

On the face of it, Henry's theory fits well with ordinary, untutored notions of what individuals are. Given Socrates and Plato, it is an obvious fact about their being individual that each is a unity, undivided internally, and that Plato is not Socrates, while Socrates is not Plato. The same could be noted for any two individuals in our experience.

What considerations might draw one to (HG)? One could argue on grounds of ontological economy: (HG) does not introduce a new type of entity to do the work of individuation. As we should avoid positing entities where there is no need to posit them, and negations are not entities, we should reject entities and accept negations as what do the work of individuation.

Unfortunately, perhaps a less cogent reason is at work. Henry's twofold negation holds for all individuals—Scotus admits this, writing, "One might be tempted unknowingly to infer, fallaciously, that as all individuals have the twofold negation in common, the twofold negation causes things to be individual."

Apart from those considerations, Scotus offers some points in support of (HG):

> [a] . . . if "one" did indicate a positive aspect, it would not be the same that being indicates. For in that case it would be an unnecessary repetition to say "one being." [b] Neither does it indicate any other positive aspect. For in that case in every being there would be entity added to entity, which seems nonsense.[5]

As the argument is not explained at any length, I shall reconstruct it as making two points on behalf of (HG). One point, [a] argues that if "one," that is, numerical unity, does not indicate a twofold negation, when it is used with "being" as in "one being," an absurdity follows. Normally, the phrase "one being" conveys information: for instance, in using it we may mean to point out a single item, rather than many or some other item. And if we use "one" to indicate twofold negation, we may use "one being" informatively. For we indicate that the item referred to is a being divided from others, and undivided in itself. But, if *contra* (HG), we use "one" to indicate not a twofold negation, but some positive entity, use of "one being" becomes uninformative. Substituting "being" for "one," in saying "one being" it is as if we say "being being." We end up talking nonsense.

Point [b] insinuates that the opponent of (HG), purporting to explain how an entity X is individual by adding to X another entity Y, rather than having recourse to twofold negation, exhibits a case of "metaphysical double vision," seeing many where he should see only one. The explanation of how X is numerically one introduces numerical multitude by introducing another entity, Y. We are to explain how these two entities, X and Y, are not a mere plurality or heap, but go together to make something numerically singular. But from two items in act, such as X and Y, one item in act cannot come.

Although he does not address them, Scotus does not have much trouble with [a] and [b]; the strongest consideration on behalf of (HG) is ontological economy. Yet considerations of economy are not supportive if the theory in question is absurd. Point [b] is best looked at as a request for an account of how two things in act can together compose one thing in act. However, if the two can in fact compose one thing, then there need be no "double vision." We shall have an opportunity to examine his account later.

Scotus could take issue with point [a] by pointing out that when one introduces an entity to do the job of individuating one need not simply concede the substitution of "being" for "one" in using the phrase "one being." The objection in [a] confuses what Gracia might call the *intension* of "one" with *the principle of individuation*.[6] An advocate of an entity as a principle of individuation may continue to mean a twofold negation, at least in part, by "one." For instance, Scotus would mean in addition, as we have seen, indivisibility into subjective parts. His theory of individuation accounts for how a principle or cause of individuation brings about a twofold negation in an entity. Thus, Scotus may continue to use "one being" informatively, without speaking nonsense.

The terminology of "intension" and "principle of individuation" is not Scotus', of course, but I believe he explicitly had this point in mind where he wrote:

> nevertheless, it also seems entirely superfluous and seems not to answer the question. Even maintaining this theory, the same question still remains. For about the twofold negation Henry posits, I ask: What is the reason why this negation belongs to this individual? If he says this twofold negation is the cause by itself, *he is not answering the question*. For we are asking about that through which the opposites of those negations are incompatible with this individual, *and consequently about that through which these negations are in it*.[7]

The fact that negations are in a thing implies that it is numerically singular—Scotus does not challenge that. But the fact that negations are in a thing, the fact that to be individual is in part having a twofold negation, is just what requires explanation. Henry's theory fails to provide the needed explanation; he is guilty of *ignoratio elenchi.*

Thus, the points raised by Scotus on Henry's behalf in favor of (HG) are unpersuasive. More importantly, Scotus argues that the theory of individuation by negations is absurd. Arguing against (HG), Scotus asks "how it comes about that the negation is a 'this,' since it is of the same kind in this and that case. For just as in Socrates there is a twofold negation, so in Plato there is a negation of two kinds."[8]

Note that in this argument, Scotus refutes a candidate for the principle of individuation *not* by directly showing it cannot cause individuality, but by showing it cannot differentiate individuals. Evidently, Scotus has in mind some tacit principle like

> If principle X causes items to be individual, X causes them to be differentiated from other items.

Given that Scotus admits part of what it is to be individual is to be different from everything else, he admits that what individuates a thing also differentiates it from everything else.

Perhaps this does not seem like much of a problem. Ready answers spring to mind: no additional positive entity is required to individuate these men. They are distinct individuals simply because Socrates is not Plato, and conversely Plato is not Socrates. Such a two-fold negation suffices for their distinct individuality. However, Scotus dismisses this answer, asking "how it comes about that the negation is a 'this,' since it is of the same kind in this and that case."[9] One negation added to a common nature is not distinct from another negation added to another substance's common nature. There still will not be anything sufficient to distinguish them. Thus, it follows that something additional that actually exists is required; mere negations are insufficient.

Scotus points out that the twofold negation Socrates has is exactly the same negation that Plato has; it is not as if each has a *different* twofold negation. Each of them is internally undivided and different from everything else. As Plato and Socrates each have the same common nature, *humanity*, the same nature in each case, with the same

Plato	the common nature “humanity”	the twofold negation
Socrates	the common nature “humanity”	the twofold negation

FIGURE 4.1 Plato and Socrates Compared on Henry’s Twofold Negation Theory

twofold negation in each case, cannot yield Socrates in one case, and Plato in another, where each is supposed to be really numerically distinct from the other. Scotus asks, “How does it come about therefore that Socrates is a singular by this proper and determinate singularity and not by Plato’s singularity?”[10] Lacking anything by which they would be distinguished, they will not be numerically distinguished, but will be numerically the same, as pictured in Figure 4.1. However, being numerically singular, Socrates and Plato each should be distinguished from the other. The theory of double negation fails to account for that numerical diversity, and thus fails to account for either one of them being individuated.

The point I have drawn attention to, that a twofold negation is insufficient to explain individuation since it cannot explain differentiation, is enough to dismiss Henry’s theory. However, it is not the point that Scotus emphasizes in dismissing Henry’s theory. Scotus himself thinks that the incompatibility of a feature, such as divisibility into subjective parts, and a thing, such as an individual, requires something more than a mere negation on the part of the thing, namely something *positive*; he places great store in this point, arguing as follows:

> I prove there is nothing formally individual in the way this theory [Henry’s] seems to hold. [a] First, because nothing is absolutely incompatible with any being through only a privation in that being, but rather through something positive in it. [b] Therefore, to be divided into subjective parts is not incompatible with the stone . . . through any negations.[11]

For instance, by [a], being able to see is incompatible with a stone not by a privation of the power of sight in the stone, but rather by an incompatibility of the feature of being able to see with something positive in the stone. One might have thought to the contrary that a stone cannot see, just because it lacks the power of sight. Scotus' point here is that in this case as well as others, a mere negation is insufficient. Something positive in the stone precludes its being able to see. Why does Scotus hold [a]?

I shall answer on Scotus' behalf. The application of negations to an item presupposes an item that is negated; there are no sheer negations that are not negations *of* anything. In the case we are discussing, the negations are to be applied to a *nature*, of itself common. Scotus writes, "nevertheless setting those negations aside . . . such a being [the nature of itself] would be compatible with the opposite of those negations."[12] The nature to which the negations are applied, taken by itself or in precision from those negations, may be compatible with a unity other than numerical unity. Only with the negations must it be numerically singular.

For instance, Scotus notes that the absence of a visible object removes the "proximate potency" to seeing: one is not immediately able to see without a visible object. Yet the mere absence of a visible object "does not produce an *incompatibility* with seeing."[13] Lacking a visible object does not leave one unable to see or blind. Likewise, Scotus argues, the twofold absence in a thing, X, of unity with others and internal division does not imply that X cannot be divided into subjective parts. But if division into subjective parts were compatible with X, it would not be an individual. Mere absence or lack is insufficient.

Scotus believes that a negation only "takes away the proximate potency to acting and being acted upon."[14] It removes from a thing an ability, as the negation of sight in a human makes her blind, but does not change the natural aptitudes of the thing to which the negation is applied. A blind human being retains a natural aptitude to see: if her visual apparatus were repaired, she would be in proximate potency to seeing. Just so, an item to which the twofold negation is applied retains its natural aptitudes; it may retain a natural aptitude to be divided into subjective parts.

Thus, even an item to which the negations are applied may retain its natural aptitude to divisibility. It is as if there were nothing incompatible with Einstein himself, apart from the negations applied to him, to his being divided into subjective parts, say many little Einsteins or perhaps Subeinsteins, as if he were a species and they were multiple instances of him. However, Einstein himself is an individual; he is, as it were, a "card carrying member" of the group of primary substances that are individual if anything is. To be an individual is to be indivisible into subjective parts. On Henry's theory, "to be divided will never be formally incompatible with it through a negation posited in the nature."[15] It follows *Einstein himself* is indivisible in this way; his being like a species is just absurd. He cannot be wholly present in each of many instantiations like a complete universal can. Thus, Scotus concludes that it counts against Henry's theory for it to permit Einstein himself to be like a species.

Scotus makes a related point when he argues "by a negation there is not constituted in an entity anything more perfect than is the entity presupposed by the negation . . .. But first substance . . . is substance most of all, and also is more substance than second substance is."[16]

Scotus identifies the natures to be individuated with secondary substances from Aristotle's *Categories*.[17] Henry's theory is supposed to explain what causes these secondary substances to be primary ones. Scotus assumes that secondary and primary substances differ in that the primary ones are more perfect. But a negation cannot add a perfection to secondary substance. A perfection is a positive item, but a negation is not a positive item; a negation has nothing to add by which a secondary substance could become more perfect and increase its perfection.

One may object to Scotus' picture—perhaps a negation applied to a secondary substance should not be imagined on the model of addition. Perhaps once a negation is applied to a secondary substance, an added positive perfection emerges or supervenes on the secondary substance, causing it to become individual. Still, Scotus could reply that in this case, the negation is not doing all the relevant work. Something other than a negation is needed—the supervening positive entity. The objection surrenders the principle contention of Henry's theory, that nothing positive is required for individuating anything. Henry's theory would still not tell the correct story about what causes natures to be individuated.

Thus, according to Scotus, not only are cogent reasons for Henry's theory lacking, but there is also reason to believe that the theory itself is wrong. This is not to say untutored, ordinary experience is wrong about individuals: they are each internally undivided and divided from everything else: they exhibit Henry's twofold negation. But that fact cries out for explanation. The twofold negation may be an *effect* of a thing's being an individual but, Scotus argues, it cannot *cause* a thing to be an individual. First of all, a negation cannot add the perfection required for a primary substance. Second, a negation cannot make that to which it is applied indivisible into subjective parts. Finally, as the twofold negation is the same in whatever it is applied to, it cannot differentiate between the things it is applied to. Scotus infers that the principle of individuation cannot be a negation, but rather must be something positive, an actual entity; he writes, "it is necessary through something positive intrinsic to this stone . . . that it be incompatible with the stone for it to be divided into subjective parts."[18] Of course, we do not know much about this positive individuating entity at this point, but Scotus' *via negativa* will continue to add content to our notion.

B Existence does not individuate

According to Scotus, this alternative takes its inspiration from comments by Aristotle in *Meta.* VII.13:

> . . . for things that are actually two are never actually one, though if they are potentially two, they can be one, e.g. the double line consists of two halves—potentially; for the actualization of the halves divides them from one another.[19]

His comments are supposed to illustrate how actuality is the principle of individuation; I shall reconstruct the argument. A finite line segment consists of two parts, its halves, but as the line segment is actually undivided, these parts are merely potential. Being merely potential, they are not individuals. Merely potential individuals are not individuals, just as merely potential lottery winners are not lottery winners—or very soon there would be no more lotteries. However, once the line is divided, the halves each become actual segments and are each individual. Their actualization from being merely potential accounts for their individuality.

Likewise in other cases, actuality is the principle of individuation. A merely potential individual, like a merely potential half of a line segment, is not an individual. A promising presidential candidate is not yet the President. But when a merely potential individual is somehow actualized, it becomes an individual. Its actuality is what makes it individual.

One might object that this account of individuation by existence trades in the notion of *merely potential individuals.* One way to refute the alternative would be to criticize this notion. Reason for anxiety about merely potential individuals is traceable back to criticism from Quine (1948).[20] Who is to say for sure if Quine, criticizing certain unnamed "subtler minds"[21] who maintain the existence of beings that are merely unactualized possibilities, had the *Doctor subtilis* in his crosshairs? Quine's complaint, that the "slum" of mere possibilities "is a breeding ground for disorderly elements" takes the form of a challenge:

> Take for instance, the possible fat man in the doorway; and again, the possible bald man in that doorway. Are they the same possible man, or two possible men? How are we to decide? How many possible men are there in that doorway?[22]

There is no principled way to answer such questions. The problem is not merely one of our inability to know, as if were we only a little smarter and sharper, we might find the right answers. The problem is that mere possibilities are not individual objects; they "cannot meaningfully be said to be identical with themselves and distinct from one another."[23] Admitting possible entities is a mistake; if we must use the notion of possibility at all, we should limit its application to *whole statements.*

Scotus, however, does not criticize the notion of a merely potential individual; in fact, he accepts it. His main point against the theory is that the merely potential individual is already fully individuated. Whatever actuality adds to the merely potential, it does not individuate. To Quinean animadversions about merely possible individuals, Scotus offers a form of reassurance. They need not be portrayed as unruly to the point of compelling their rejection. Quite to the contrary, merely possible individuals each have their place in what Scotus calls *the categorical hierarchy*. Scotus does not have an argument for the acceptance of the categorical hierarchy that I can find. However, he does offer it as an account or model in which merely potential individuals have a place. As long as it is consistent to the best of our knowledge, it may serve as an answer to Quine's request for an account of the identity of mere possibilities. In this section I shall both (1) explain why actuality or existence cannot individuate merely potential individuals, and (2) briefly explain the categorical hierarchy.

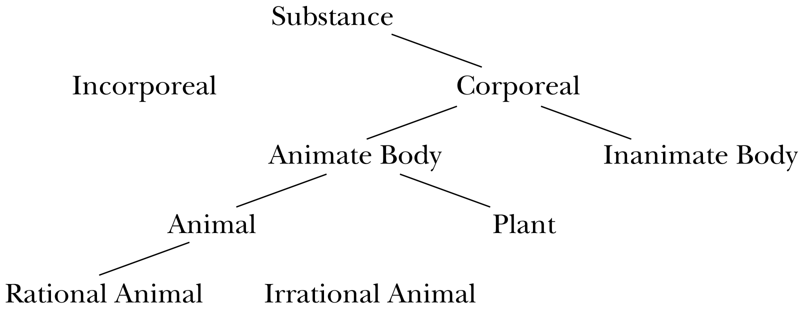
Scotus' basic complaint against existence or actuality as a principle of individuation is:

> What presupposes the determination and distinction of another is not the reason for distinguishing or determining the other.[24]

But existence presupposes the determination of another; in itself it is not determinate. He writes "the being of existence does not have its own differences other than the differences of the being of essence."[25] Existence does not come differentiated in itself, but rather is differentiated by the essences to which it applies.

The categorical hierarchy is not explained at length by Scotus; I shall piece his doctrine together on his behalf. Scotus takes the divisions of Porphyry's Tree with ontological seriousness: for him, the categorical hierarchy, modeled after Porphyry's Tree, exhaustively maps out the intelligible structure of reality in terms of genera, species, and individuals, without respect to actual existence. Even if nothing at all had been created, the categorical hierarchy would have been the same. Even if another world than this one had existed, the categorical hierarchy would remain unchanged.

Porphyry only maps out the category of substance in detail.[26] Note that Scotus had extensive knowledge of Porphyry's work, having debated in our texts on points of interpretation and written a commentary on the *Isagoge*:



In the end, Scotus' point is that since the basic categorical hierarchy would be the same whether or not it remained merely possible, actuality does not individuate its members. But as stated above, Scotus does not explicitly defend his own claim that this hierarchy maps intelligible reality.

C Accidents including quantity do not individuate

One might think an item such as Plato is individuated by its accidents. Suppose Plato is standing in the forum; his place, roughly the region circumscribed by the surface of that which contains him, and position, standing, are accidents. Surely nobody else can have just his place and position. His occupying just that place at that time is what makes him unique, individual. This is Boethius' opinion:

> The variety of accidents is what makes difference in number . . . .. If in the mind we separate out all the accidents, nevertheless place is diverse for each of them. We can in no way suppose that it is one for two men.[27]

One might think that Scotus should reply by pointing out that the individuation of a substance cannot depend on an accident, since the accident depends for its existence on the substance. The advocate of individuation by accidents seems caught in circular reasoning. Thus, the accident cannot cause the substance's individuality, as the accident presupposes that individuality. However, such a reply will not do. Scotus believes that not all accidents depend on substances. For instance, absolute accidents like quantity and quality can exist on their own. They are really distinct and separable from the substances in which they inhere. Thus, an absolute accident like quantity does not depend for its existence on the very substance it is said to individuate.

D Matter does not individuate

Still, whatever individuates a common nature must be a positive entity and must combine with the nature to make a substantial, and not merely an accidental whole. Moreover, as we have seen, substances are individuated already in the categorical hierarchy, without regard to their actual existence. Thus, there may be unactualized possible individuals occupying the lowest positions in the hierarchy. However, Scotus' *via negativa* has not yet given a clear picture of just what it is that *causes* the individuation of substantial natures.

Taking inspiration from Aristotle, one might propose *matter*. Not matter in general, but individual matter, the matter that an individual has. The idea in the case of a human being, says Socrates, assumes that he consists just of the form "human" and matter, his body. The form cannot be what makes him individual; he shares it in common with other humans. So it must be his body. His body is unique to him, not shared with anything else. Note that the appeal is not specifically to quantified or designated matter—I conjecture that the move from appealing to an individual's matter, like Socrates' body, to quantified matter, say the matter of Socrates under definite dimensions in the place it occupies, is Aquinas' articulation of Aristotle's view, rather than a view explicitly in Aristotle.

Scotus cites a series of texts from Aristotle in support of matter as a candidate for a principle of individuation.

[1] In *Meta.* V.6. 1016b32–33, Aristotle writes, "Again, some things are one in number, others in species, others in genus, others by analogy; in number those whose matter is one." He seems to say for any x and y, if the matter of x is the same as the matter of y, x and y are numerically the same individual.

[2] Perhaps better known is the text at *Meta.* VII.8, 1034a5–9:

> And when we have the whole, such and such a form in this flesh and in these bones, this is Callias or Socrates; and they are different in virtue of their matter (for that is different), but the same in form; for their form is indivisible.

Here he seems to say that Callias and Socrates are two different individuals who are each wholes consisting of matter and form. As they are humans, they have one and the same form, "human," in common. They are not different from each other in virtue of the form they share. Therefore, they must differ on account of their other constituent: each has its own matter, and that suffices for their diversity.

[3] In *Meta.* XII.8, 1074a31–8, Aristotle writes,

> Evidently there is but one heaven. For if there are many heavens as there are many men, the moving principles, of which each heaven will have one, will be one in form but in number many. But all things that are many in number have matter.[28]

Here, Aristotle seems to say that the moving principles of the many heavens could not be differentiated by their forms, as they have one and the same form in common. Rather, they are differentiated by having different matter; the point of [3] is like that of [2]. Note that texts [1], [2], and [3] posit matter not as a principle of individuation in Scotus' sense, but rather as a principle of *numerical diversity.*

[4] In *Meta.* VIII.3, 1043b1–3, he writes "For soul and to be soul are the same, but to be man and man are not the same, unless indeed the soul is to be called man." Why is it that to be man, the essence of a man, and man, an individual man, differ? The matter of a man is not included in the essence of the man, what is called "to be man," but is outside it. This matter is that which added to the essence yields an individual human being.

[5] In *De Caelo* I.9, 278a3–15, Aristotle writes, "When I say 'heaven' I indicate the form; when I say 'this heaven' I indicate the matter." That is not to say that "this heaven" indicates sheer matter without any form, but rather the form indicated by "heaven" with the addition of matter. That is, "this heaven" indicates not merely form, but

matter together with form. The matter is what, added to form, makes the heaven a "this," an individual. Texts [4] and [5] posit matter as a principle of individuation in Scotus' sense: it is what is required with the essence or form—Aristotle seems to equate them in these texts—in order for there to be an individual human. Thus, Aristotle evidently thinks matter both diversifies and individuates the individuals of a species; he not only addresses a problem of individuation, he addresses Scotus' problem.[29]

Hence I disagree with Regis, who argues "that there is in fact no principle of individuation in Aristotle's metaphysics, and it is superfluous to invest it with one."[30] Regis' intuition is that for Aristotle, "an entity is individual as given, and no principle of its individuality [that is, cause of its individuality; Regis recognizes the problem of individuation in Scotus' terms] is either necessary or possible."[31] Matter cannot be a principle of individuation, since "without composites, matter would not and could not be."[32] Only composite material substances exist, like Socrates and Secretariat. The matter of Socrates does not exist on its own like Socrates exists on his own. To speak of Socrates' matter is to make an abstraction, to talk about something that does not exist on its own apart from Socrates. But if it does not exist on its own apart from Socrates, it cannot account for his individuality.

Charlton makes a similar point writing,

> Aristotle means, apparently, that a substance is just what is an individual, and does not have to be related to anything else to be identified or individuated. There is nothing, so to speak, *pros hon* this horse is called this, but other things are rather called this on the basis of a relation to it.[33]

The individuality of substances like Socrates is a basic fact of the world, not something that needs an explanation in terms of some cause. A substance's matter is merely an "aspect" of the substance, and is not able to serve as the term of a causal relation to the individuality of the substance on which it depends for its existence. However, unlike Regis, Charlton recognizes that Aristotle tries to explain the individuality of substance by appealing to its parts, matter and form.

Lloyd concurs with Charlton and Regis, saying "form and matter are both abstractions from the concrete individual."[34] For him, "the matter of X" according to Aristotle should be understood as "X according to its matter" or "X *qua* matter." Matter is not to be understood as a stuff that X is made out of, but rather just X under a certain description. Matter, then, is not a principle of individuation in the sense of something which causes a substance to be individual. Rather, the individuality of X is a basic fact. Referring to the matter of X to explain why X is an individual just calls our attention to the fact that X is a subject or substrate.

Regis confuses the interpretation of Aristotle with the question of whether what Aristotle thought about individuation is consistent. In light of texts [4] and [5], I believe that Aristotle did see matter as a principle of individuation. However, in virtue of his doctrine that a substance's matter cannot exist on its own, apart from the substance to which it belongs, a point correctly recalled by Regis, matter cannot play the role Aristotle desired for it. Aristotle's thought is inconsistent on this point, and Regis' interpretation should bring this to light. Instead, he attributes to Aristotle a more defensible doctrine, that entities are simply given as individual without a principle of individuation, that Aristotle himself did not espouse.

Moreover, Regis, Charlton, and Lloyd each take the form to be an abstraction, or aspect of the substance to which it belongs, rather than an item with its own entity. Scotus differs, holding that the common nature, and the substantial form as well, each have their own proper entity, distinct from that of the substance to which they belong. As unity follows on entity, the common nature, with its own entity, has an indifferent unity of itself. From that fact, Scotus' problem of individuation arises. If Regis, et al., are correct about Aristotle, it seems that Scotus' problem of individuation cannot arise for Aristotle. There would be no item part of a substance whose indifferent unity must be particularized by some cause before it can be part of a substance.

But then what is Aristotle doing in texts [1]–[3], and especially [4]–[5]? Is there some tension in his metaphysics leading him to answer a question which, according to Regis and company, he does not have to answer? I think there is, namely a tension arising from a need to invest form with some measure of proper entity, such that it is not merely an aspect of or abstraction from that to which it belongs.

Note that Regis' reason why matter is not the principle of individuation is unavailable to Scotus. Regis noted that the matter proposed as a principle itself depended for its existence on that whose principle it was supposed to be. But Scotus, as we saw in Chapter 2, holds that matter has its own entity, apart from the entity of the substance to which it belongs. Indeed, the matter can exist on its own, without the substance and the form.

According to Scotus, matter cannot be the principle of individuation, namely, that which causes a nature common of itself to be individual. He writes, "I grant that matter absolutely, insofar as it is matter, is not the reason for distinction or individuation."[35]

Perhaps "bare" matter is not enough to individuate, but the particular matter—"quantitative accidents""—of human bones and human flesh are enough to do so? Accepting this, in order to account for the singularity of things, one might say what makes two things distinct individuals is simply that this man has different quantitative accidents from that man. For instance, this man has this body, this fully determinate quantity of flesh and bones, and that man has that body, that fully determinate quantity of flesh and bones. In general, at least for material substances, a thing's having a determinate quantity of matter suffices to make it an individual with numerical unity.

Scotus also dismisses that answer: the quantitative accidents that individuate a substance on this view themselves can exist only because they are accidents of a substance. Scotus writes that the quantity supposed to individuate a substance "is not determinate quantity, because that follows on the form's being in matter, and consequently follows on the form's being in matter, and consequently follows on the substance's singularity."[36] That is, the singularity of the substance to which these accidents belong is needed to explain their own singularity. The same kind of objection will work against any theory of individuation that uses accidents.

Scotus uses these failed theories to build up his own position. He partially agrees with the second answer: mere negations are insufficient to make a thing an individual with numerical unity, and something positive in addition to the nature is required. But against the second, he says that the additional positive entity cannot be accidental, such as a determinate quantity. Whatever individuates a nature must be an item that both exists, and is non-accidental.

In addition, Scotus claims this individuating entity must be simple, and that it cannot have a nature. Otherwise the positive individuating entity will require something else to individuate it. Thus, what makes a substance an individual is a positive, non-accidental entity that is simple, without a nature of its own and the intrinsic complexity that having a nature implies for those individuals to which it belongs. Scotus calls these "individual entities," writing of them ". . . there are certain positive entities that per se determine the nature."[37] I shall use the more familiar term, "haecceity," for Scotus' "ultimate specific difference." All the other options having been eliminated, this option alone remains.

II Scotus' Second Argument

Scotus has a second interesting, and more challenging, argument in *Ord.* II.3.1.6.170, turning on a question *different* from that of what makes a substantial nature individual. In (A2), Scotus infers the existence of haecceities from the need to explain how two different individuals of a lowest species can be different. The problem Scotus deals with in (A2) is different from his original problem of individuation. The problem is more like a question we should expect Aristotle or Aquinas to address. I suggest that he tacitly presents this second argument at least in part to show that one should accept haecceities, even if one does not ask Scotus' question about individuation, but rather asks Aquinas or Aristotle's. Here is my summary of Scotus' argument:

A2:

1. Suppose x and y are different singular substances in the same species, S.
2. It follows that x and y are different beings, yet somehow the same.
3. Their difference is not accounted for by the nature in x and the nature in y.
4. Besides the nature in x and the nature in y, there are some primarily diverse items by which x and y differ.
5. Those primarily diverse items are not negations, nor accidents, and so on.
6. It follows that they are positive entities that *per se* determine the nature of that to which they belong.

Premise (1) is given: for example, there are different humans, dogs, and so on. Given that the individuals of the same lowest species have the same common nature, any two individuals of a lowest species will share a proper part, namely the common nature. Thus, we may say, as in (2), that they are different, two numerically distinct singulars, but somehow the same—the same in nature. Clearly the nature is not that by which they differ, as they share the same nature. Thus each must have some other proper part in addition to the common nature, and that additional proper part causes them to be different.

Why must *each* of them rather than just one of them have an additional proper part? After all, we may picture a situation like the following, in Figure 4.2, where x and y are actual individuals of a lowest species, n is a common nature, and z is that by which y differs from x:

x	y
nature n	nature n
	z

FIGURE 4.2 An Untenable Picture

Surely z is sufficient to differentiate x and y.

But the situation pictured in Figure 4.2 should be rejected. Individual x lacks a proper part in addition to its common nature; x is just its common nature, n, alone. Presumably, a common nature alone would have only its proper entity and proper unity, a unity less than that of singularity. It follows that x would have actually, outside the intellect, a unity less than numerical unity. But Scotus claims that this never happens: the common nature is always accidentally singular outside the intellect. Thus, as x is to actually exist, there is some item, w, that is a proper part of x along with n; the addition of w is supposed, along with n, to cause x to be an individual. Thus, we come to the situation pictured in Figure 4.3:

x	y
nature n	nature n
w	z

FIGURE 4.3 An Incomplete Picture

In (4), Scotus claims that the items by which x and y differ must be primarily diverse. That is, they must share nothing in common at all. Why is that? In particular, it seems Scotus must be able to rule out two types of situations.

In one case, both w and z turn out to be common items: w is just m, z is just k. If m and k are the same common item, x and y will not be differentiated outside of the intellect. Let them be different common items. In that case, neither x nor y will be singular. For each of them, either their common items are unified or they are merely an aggregate. If they are merely an aggregate, then x and y are not individual substances. If they are unified, it must be because one stands to the other as act to potency, though both are common. Such a union will yield only another common item, as a genus and differentia are united to forma lower species. If each is common, then neither is individual. Thus, the situation in Figure 4.4 can be ruled out.

x	y
nature n	nature n
something common, m	something common, k

FIGURE 4.4 A Second Untenable Picture

I suggest that this reasoning applies just as well for Scotus in the case of the common nature. In order for the nature to be a reality composing some whole, it must be a being in itself, and not simply a being in another. It follows that when it is a part in an act-potency union with a haecceity, it is a being in itself, with its own entity. This should not re-introduce worries about the consistency of Scotus' theory, since the entity of the contracted nature is not actually common. However, the doctrine that the nature retains its entity in composition with the haecceity in a thing raises two new problems.

Figure 4.5 can be ruled out as well; as I argued for Figure 4.4, in Figure 4.5, x will not be an individual substance. It will be either an aggregate or something common.

As x and y by hypothesis are different individual substances in the same species, it follows that no composition of them where at least one consists merely of non-singular items will suffice to explain their

x	y
nature n	nature n
something common, m	something singular, h

FIGURE 4.5 A Third Untenable Picture

x	y
nature n	nature n
something singular, k	something singular, h

FIGURE 4.6 Scotus' Picture

distinction. In any such case, problems like those in Figures 4.4 and 4.5 arise: at least one of the pair x, y will not be individual. It follows that a successful explanation of their difference should proceed by considering each of x and y composed of something singular in addition to their natures, as pictured in Figure 4.6.

I omit discussion of another type of situation as irrelevant, namely where at least one thing includes other non-singular elements in addition to its nature and singular element. The additional non-singular element(s) will either yield an aggregate, or another non-singular element that can take the place of n.

In Figure 4.6, k and h cannot be the same singular. In that case, x and y would not be differentiated. Thus, they must be different singulars.

But must they be primarily diverse, as Scotus maintains, such that they share nothing in common? Suppose k and h share something in common, c, which is a proper part of each of them. In that case, there is a proper part of k, namely c*, which is different from c, and a proper part of h, namely c#, which is different from c. Either c* and c# are primarily diverse, or, if they share something in common, d, there will be an infinite regress. I assume there will be an infinite regress; otherwise there will be a regress that stops with items that are primarily diverse. The infinite regress should be rejected, as it will yield two lists, l1 of items composing x, and l2 of items composing y. The lists will have exactly the same members, and that will not suffice to differentiate x and y. It follows that the difference between x and y can only be explained by items that are primarily distinct. It follows that Scotus' premise (4) is true.

Premise (5) notes that the primarily diverse singular items by which individuals of a lowest species differ cannot be negations, acts of existence, accidents, or matter. From what we discussed previously in presenting (A1), (5) follows: none of those items can individuate a singular substance. Scotus infers (6), that the primarily diverse items that suffice to differentiate singular substantial forms are singular entities, entering into a composition with the common nature. The substantial form is a whole, of which the common nature and the differentiating entity are each proper parts.

But *caveat lectores*. First, note that there are many versions of the problem of individuation.[38] Gracia explains the problem, or tries to explain it, by claiming the issue "concerns the necessary and sufficient conditions *for something to become individual*."[39] Gracia's elucidation garbles the issue. Scotus *does* seek the cause of the individuality of material substances. But it is wrong for Gracia to characterize that search in general as one that looks for the conditions of something *becoming* individual. Gracia's characterization is ambiguous between mistaken interpretations, namely: (1) the cause of something coming to be individual from not being individual; and (2) the cause of something coming to be an individual of a lowest species at the end of a temporally located process of development. On interpretation (1), something, call it *x*, became individual from not having been individual: *x* existed at time *t* before it was an individual, and underwent a change so that at some time later than *t*, after the change, *x* was an individual. Scotus would not admit that something becomes individual in that way. As we saw in Chapter 3, Scotus does not admit actual universals or common natures. He would not admit a problem wherein first an item is common or universal, and then becomes individual, as the initial condition would never arise. Thus, his problem of individuation should not be identified with (1).

Neither should Scotus' problem of individuation be identified with (2). Indeed, for a philosopher such as Scotus broadly within the Aristotelian metaphysical tradition, "the occurrence in the megascopic world of highly organized, sharply demarcated, integral structures or systems—the biological objects which are substantial individuals . . . stands out as a remarkable fact that invites explanation."[40] The account for substantial individuals includes explaining "the shaping-up of the organisms into 'thises' exemplifying stable natures or 'whats' across time."[41] How is it that a human being develops from an embryo in the womb? That process of development can be viewed as a development toward the thing's being a human individual; it can be viewed as a process of individuation. Thus (2) is a legitimate problem distinct from (1): (2) does not require the organism fail to be an individual, and rather be a universal or something actually common, before it reaches the end of its natural process of development.

However, (2) is *not* Scotus' problem of individuation. Scotus asks about an individual with a common nature, what makes it individual, given that its nature of itself is common? He assumes the existence of an individual with a nature, and does not look for an account of how it developed into an individual with a nature.

Thus, Gracia (1988) is not helpful for filling in positive details of Scotus' search for a principle of individuation; of course, that is no great surprise, since Gracia does not take up Scotus' problem exclusively, but rather tries to provide a general account of problems around individuation and individuality. However, Gracia (1994) takes up Scotus' problem exclusively. There, Gracia distinguishes the problem (3) of finding "the ontological status of the entity (principle, cause, or what have you) which is responsible to be for individuation" from the problems (4) of explaining the ontological status of individuality, and (5) of finding the intension of the term "individuality."[42] Problem (5) is satisfied by a correct definition of individuality, whereas problems (3) and (4) are not. Problem (4) is satisfied by a correct characterization of individuality. We are to be told whether individuality is a property, a relation, or some other kind of entity. Problem (3) is satisfied by a correct characterization of the item or items, call it or them X, responsible for a thing's individuality.

Scotus' problem of individuation, where we seek to find the cause of a thing's individuality, is an example of Gracia's problem (3). However, Gracia hesitates to make that identification; he notes that "Scotus does not use the term 'cause' in connection with individuation" and that "it [the term 'cause'] is completely dropped from q.6

of the *Ordinatio*."[43] He conjectures that it was dropped because "none of the things Aristotle identified as metaphysical principles could qualify as a source of individuation for Scotus," and that "in the Aristotelian framework Scotus was using there are only four causes . . . and none of these is the individuating entity for Scotus in the *Ordinatio*."[44] I do not take Gracia's hesitation seriously. Scotus mentions a "cause of singularity" earlier, discussing common natures. Moreover, as we shall see, although in q.6 the individuating entity is not one of Aristotle's four causes, it does have a cause-like function, namely that of reducing an item in potency, the common nature, to act. Reducing an item in potency to act, the individuating entity behaves analogously to an efficient cause reducing something in potency to motion to actual motion.

Scotus' problem of individuation, namely determining the cause of a material substance's individuality, is not the problem of individuation many contemporary interpreters of Aristotle address. Lloyd (1970) distinguishes the question of "what makes one man rather than (or perhaps as well as) two arms, two legs, or several bones and a quantity of flesh," a question that seeks the principle of unity, from the question "what makes him this man rather than another man," a question that seeks the principle of individuation.[45] Indeed, Scotus' problem of individuation is not one of determining the principle of unity. But neither is it Lloyd's problem of individuation. Lloyd's problem of individuation is one of determining the principle of distinction between different things of the same lowest species; Regis (1976) and Gill (1994) take the problem of individuation similarly.[46] According to them, given two men, we should ask, "why is this man a different man from that man?"

Charlton (1972) takes the problem of individuation to be one of determining "what makes one individual different from another at the same time."[47] He adds to Lloyd's formula the qualification that we should consider two individuals of the same lowest species simultaneously; Charlton sees a principle of synchronic individuation. Furth (1978) distinguishes the principle of a substance's synchronic identity and diversity from its principle of diachronic identity and diversity, and writes that Aristotle "certainly holds that two distinct individuals not differing in species are nonetheless distinguishable in point of their distinct material components."[48] Thus, Furth says "the 'principle of synchronic individuation' in the sense of what distinguished simultaneous cospecific [sic] individuals, is matter."[49] Whiting (1986) seeks a synchronic principle of individuation between two things of a lowest species. Whiting writes that on the "traditional interpretation," "matter is what individuates two simultaneously existing members of the same *infima species*;"[50] she goes on to develop a case for an alternative to mere matter, namely individual form.

These commentators on Aristotle each see the problem of individuation as arising between two things of a lowest species, and in this they differ from Scotus, who took it to arise for even one thing of a lowest species. For some of them, Scotus' problem of individuation does not arise. Whiting (1986), who says that an individual substantial form makes one substance differ from another of the same species, may ignore Scotus' problem. There are no common natures according to Whiting: a substance's individual substantial form suffices to make it an individual. But for Furth (1978), who holds that non-individual species-forms are constituents of substances, Scotus' problem of individuation is a live issue*: what besides a substance's species-form makes a material substance an individual?* Matter with the species-form suffices to distinguish between things of a species, but does matter with the species-form suffice to make a thing of a species a unique and unrepeatable individual? Furth does not address the question, and what his answer would be is unclear. Thus, Scotus' problem of individuation is sensitive to ontology. It requires an ontology that recognizes non-individual, though not necessarily common, natures.

Admittedly, Aristotle himself does not appear to consider the problem in this way. For instance, consider Aristotle in *Meta.* VII.8, 1034a5–8:

> And when we have the whole, such and such a form in this flesh and these bones, this is Callias or Socrates; *and they are different in virtue of their matter* (for that is different), but they are the same in form; for form is the indivisible.[51] [emphasis mine]

For Aristotle, the question is one of a principle of distinction: what makes these two humans different, given that they have the same form as a constituent? There must be some other constituent that they do not share, say matter, or quantitatively determinate matter. But Aristotle does not consider the individual material substance alone and ask what makes it individual, apart from why it is distinguished from other things.

Pace Scotus, who appears to read his own theory of common natures back into Aristotle, the fact that their problems of individuation differ confirms my suspicion that their underlying metaphysical accounts of the structure of substance differ. Having developed his theory of common natures with real, proper unity and entity, Scotus may have a problem that Aristotle, and for that matter, Aquinas, did not. In particular, Scotus claims that the common nature is a constituent of the material substance with its own lesser unity and entity. That is not Aquinas' claim: he affords the common nature neither unity nor entity. And it is not the claim of contemporary interpreters of Aristotle, like Loux and Lewis, who, unlike Scotus, do not claim that the species essence is a constituent of material substances. I suspect that Loux and Lewis are more faithful than Scotus to the letter of Aristotle's *Metaphysics.* If so, the proper answer of an Aristotelian, or even a Thomist, to Scotus' criticisms of their theories of individuation by matter or signate matter is that Scotus has misconceived or ignored what they are doing—they are not explaining why a given material substance is individual, but rather why it is distinct from other individuals.

III Gill's Challenge

Mary Louise Gill (1994) questions whether the problem of individuation can be solved at all, if it is conceived "globally" as an attempt to account for what causes individuality in anything individual. She writes, "First, quite apart from Aristotle's theory, *I doubt that we can explain what makes a particular the particular that it is.*"[52]

She argues her point by proposing a dilemma.[53] Say we wish to explain the individuality of Socrates and Plato by giving a general account of individuality, one that will apply to both Plato and Socrates. In our general account, we claim that some item, X, accounts for individuation. "X" can stand for form, matter, or something else:

precisely what it stands for is irrelevant to the argument. She asks, "Must we presuppose the particularity of the feature that accounts for individuation?" If so, our theory of individuation presupposes what it attempts to explain, namely, it attempts to explain individuality in things by appealing to individuating items that are presumed to be individual. In that case, our explanation is merely circular.

If not, something else secures the individuality of the individuator. For example, say matter is our individuator, but that the matter itself is not individual. We may then appeal to something else, say the spatio-temporal location of the matter, to secure its individuality. But appealing to something else like spatio-temporal position is not a good strategy. For we may ask of this "something else" what accounts for its individuality. Either the "something else" is just presumed to be individual, in which case we have not really explained individuality in things, or we are off on an infinite regress, which is also a failure to explain. Thus, our attempts to explain the individuality of things must fail.

She suggests an alternative, that a "plausible strategy" would be to "accept certain entities as basic particulars and to individuate others with reference to them."[54] That is, we give up trying to explain individuality *tout court* and make a fundamental assumption that certain items are "brute" individuals, and then these can serve as individuators for other items. That is, we assume the individuality of certain things as basic, and stop trying to explain the individuality of everything, something that we cannot do anyway. She calls this conception of individuation "weak individuation."[55]

Gill's dilemma misses the point of Scotus' theory of individuation: he makes no attempt to give a global theory of individuation. For instance, God falls outside his theory. The account we are discussing here is narrowly circumscribed rather than global: we are to find *not* what accounts for individuality simply, but what accounts for the individuality of created substances. Who might she be thinking of when criticizing global attempts to explain individuation? She does not say; I say her target is a straw man. And Scotus, for one, is engaged in explaining "weak individuation."

It is a truism that explanation must stop somewhere. It is no vice of explanations to assume some truths to be primitive. Just so, *pace* Gill, it is no vice of theories of individuation to explain the individuation of one type of thing by appealing to the individuality of another type of thing, whose individuality is a primitive fact. Scotus' haecceities are just such primitive individuals which individuate, and his project—while strong in ambition—is relatively modest in scope. That being said, the next chapter shall turn to Scotus' development of his own position in the context of contemporary metaphysics.

IV Scotus' Haecceitism in the Context of Contemporary Metaphysics

It might help us to understand Scotus' theory of individuation by considering it in the context of contemporary theories of individuation that follow broadly the same strategy as his own, namely, in adopting a positive entity, like primitive "thisness" or a bare particular, as the principle of individuation. That is, Scotus is not alone among metaphysicians in positing primitive thisness or haecceity as part of the metaphysical furniture of the world. Nevertheless, I shall argue in favor of his version. I point out (1) that Scotus' theory is unique among contemporary forms of Haecceitism, and argue (2) that it does the job of individuating better than any of its close relatives.

A Contemporary haecceitism

1 Adams

R.M. Adams commits himself to a popular form of haecceitism rather more akin than Kaplan's haecceitism to Scotus', yet still significantly different. Adams asks, "Is the world—and are all possible worlds—constituted by purely qualitative facts, or does thisness hold a place beside suchness as a fundamental feature reality?"[56]

By "suchness" he means qualitative features or universals that need not belong to or be related to any single individual. Thus, *being red* is an example of suchness, whereas *being the red hue of this rose petal* is not, as, having made reference to an individual, it is not a pure qualitative feature. Adams asks, in addition to properties that are pure universals, are there also properties that are examples of thisness?

By "thisness" he means "the property of being identical with a certain particular individual."[57] For instance, *being the same as Vespasian* is a thisness, while *being self-identical* is not, as it is merely the property of self-identity a property that many individuals may share according to Adams, and not the self-identity of any individual alone.

While Adams explicitly calls his thisness "haecceity," he is careful to distinguish his own position from that of Scotus. Adams posits haecceities that are properties, and believes that properties are not parts of the things to which they belong. In contrast, "Scotus regarded properties as components of the things that have them. He introduced haecceities (thisness), accordingly, as a special sort of metaphysical component of individuals."[58] Adams leaves the purported distinction between thing and property fuzzy, but there is something right about it, worth trying to put a finger on and clarify.

For instance, Scotus holds that the haecceity of Socrates is a proper part, with his common nature, of substantial form belonging to him. To put it crudely, haecceity, common nature, and substantial form are thing-like entities that can combine to make wholes. Adams says properties are denied that capacity: one may speak of them as bundled together perhaps, but they are not the right kind of thing to go together as proper parts in a whole. There is a categorical difference, therefore, between Adams' haecceities and Scotus'.

2 Rosenkrantz

Rosenkrantz shares Adam's conception of a haecceity as a property of self-identity to a particular thing. Rosenkrantz defines "haecceity" as the property F such that there is a thing, x, and F is the property of being identical with x;[59] in ordinary English, "a particular haecceity is the property of being identical with a certain entity."[60] He has in mind, as would Adams, *being identical with Socrates* but not simply *being self-identical.*[61] Rosenkrantz admits "a haecceity is an abstract entity" and, going further than Adams, holds even that a universal, like *squareness,* may have its own haecceity, *being identical with squareness.*[62] Like Adams, however, Rosenkrantz does not hold haecceities to be constituents of the items to which they belong. He does not make this point as clearly as Adams, but it is implied, I believe, in his denying that haecceities are substrata or mereological parts.[63]

The haecceities of Adams and Rosenkrantz are unable to serve as principles of individuation, in Scotus' sense. Recall that Scotus' problem of individuation is to find what causes a thing to be an individual. More specifically, given that a thing has a common nature, he wants to know what must go with that common nature in a thing to make it individual. Rosenkrantz might disagree, as he uses his haecceity to address the problem of individuation. For him, the "problem of accounting for the diversity of particulars at a time is traditionally known as *the problem of individuation*."[64]

He even cites Scotus to support his claim about "the tradition."[65] Thus, he seeks a principle:

> That provides an analysis of the diversity of particulars at [a] time which is a logically necessary and sufficient explanation for the diversity of particulars at a time.[66]

But Scotus is not primarily interested in what accounts for the diversity of individuals. True, accounting for the diversity of individuals plays a part in his argument for haecceities, but that is beside the point. It is not obvious without an argument that such a principle as Rosenkrantz seeks would explain what makes a thing an individual in a world without a plurality of individuals. That is, a principle of numerical diversity need not be, for all we know, a principle of numerical singularity. This is a common point;[67] Castaneda puts it this way:

> We have just pointed out how the individuators of an ordinary individual, i.e., what accounts for the individuality of the individual in question, need not be also what differentiates that individual from any other individual, let alone any other entity.[68]

I am more modest than Castaneda: I merely wish to see Rosenkrantz' argument for the convergence of the principles of individuation (in Scotus' sense) and diversity.

Regardless, can the haecceity of Adams or Rosenkrantz do Scotus' work, functioning as a cause of a thing's individuality? I fear not. It cannot play the proper causal role, since the existence of the haecceity property *presupposes* the existence of the very individual it is supposed to individuate. Recall that for each of them, the haecceity of Crassus would be a property like *being the same as Crassus.* There is a problem explaining how a property like that could play any causal role individuating Crassus. Surely it cannot be part of a causal event individuating Crassus, namely, following Kim, a property exemplification at a time. Any event in which it was a part would involve its exemplification. In that case, whatever exemplified it would be Crassus—nothing can be the same as him, and yet not be him. But then Crassus' existence is presupposed in the very event that is to individuate him. A similar circularity in causation would undermine any attempt to make the property play a causal role in individuation.

Rosenkrantz might reply that his account of individuation is not circular. According to him, "At time *t*, a particular *x* is diverse from a particular *y* =df. There exists a haecceity *H* such that: (i) at *t x* exemplifies *H*, and (ii) at *t y* does not exemplify *H*."[69]

The haecceity H plays some role in the diversity of x and y. He claims that the account is not circular, since the *analysans* does not use "the concept of the diversity of particulars at a time." However, for Scotus, diversity is not the primary item to be explained by a principle of individuation, individuality is. Rosenkrantz' defense misses the point: even if his account of diversity is non-circular, it may still be a circular account of individuality. If it is not, he owes us an argument.

3 Swinburne

Finally let us consider Swinburne (1995)'s account of haecceity.[70] Of the philosophers using the notion of a haecceity we have examined so far, he—claiming that a thing's thisness in addition to its universal properties *makes* a thing an individual as well as diverse from other things—comes closest to Scotus' notion of the problem. Swinburne's primary concern about individuation is not to find a principle of diversity. He writes, "An individual has thisness . . . if a very weak form of the principle of the identity of indiscernibles does not apply to it."[71]

Swinburne has in mind a case where "there is a possible world in which there is a human with all the same properties as myself who is not me."[72] These properties are pure universals, like *being red* or *being able to laugh,* which can "be possessed by different individuals."[73] Impure properties, referring to individuals, are excluded, for any non-trivial version of the identity of indiscernibles employs pure rather than pure properties.

According to the weak version of the identity of indiscernibles in which Swinburne is interested, "Any two individuals which have all the same properties are the same individual."[74] He envisions a case where there is another individual on another possible world with just the properties that someone else has. These two have all their properties in common, and yet are not alike. One has its unique thisness, which is not a universal, and the other has its unique thisness in turn. An individual's thisness is a basic feature of things in the world, not a universal nor explainable in terms of universals, whether properties or relations.

He writes, "what makes it the individual that it is not solely a matter of its properties, which is what Duns Scotus . . . seems to be claiming."[75] Swinburne's use of thisness to explain a thing's individuality is like Scotus', but he seems not to have a clear understanding that explaining a thing's individuality is the primary task of Scotus' problem of individuation: "Duns Scotus discusses the question of what is the principle of individuation—what makes a thing 'this' and not 'that'."[76]

This gloss makes it seem that Scotus is primarily concerned with explaining numerical diversity. Moreover, explaining "thisness" Swinburne writes it "is a particular way of being a member of its species."[77] That claim is misleading: a haecceity is not a *way,* but rather a *part* of that to which it belongs. Swinburne misses the point that a haecceity is not like a property, but *enters into things' composition.*

Thus, none of the contemporary philosophers who employ the notion of "haecceity" share Scotus' notion. Adams, Rosenkrantz, and perhaps Swinburne take it to be a property, rather than an entity entering into constitution of that to which it belongs.

According to Adams and Rosenkrantz, for whom the haecceity is a property of identity to a particular thing, the haecceity cannot play the role Scotus intends, namely that of causing a thing's individuality. None of them takes up Scotus' problem of individuation. Thus, not only is Scotus' haecceitism unique among these contemporaries, but only it seems able to do the job of causing a thing to be individual.

4 Kaplan

Kaplan raised the term "haecceitism" outside the context of the problem of individuation in his *How to Russell a Frege-Church.* There he is worried about the problem of the trans-world identity of individuals. Consider an individual in our world, the actual world, Julius Caesar. We wish to know whether he *had* to cross the Rubicon, or whether he *could have* restrained himself and stayed on the far side, contrary to what in fact happened. How are we to settle the question? We may consider a way the world could have been, but actually was not, where Caesar was a general and stood on the far side of the Rubicon, deliberating whether or not to cross with "his" army.[78] Call this way the world could have been *w1.* Indeed, with sufficient imagination and time, we may consider a number of different ways the world could have been: *w1, w2, w3, . . . , wn.*

Suppose we have a special science-fiction machine, a "Jules-Verne-o'Scope" (Kaplan's fanciful suggestion) that enables us, in the actual world, to peer into other ways the world could have been, or other possible worlds, in order to see what happens in them. Thus, we can look through the machine, into a possible world, and see whether in that possible world Caesar crosses the Rubicon or not. If we find even just one possible world on which he refrains from crossing, it follows he could have failed to cross the Rubicon. Assuming (rather implausibly) we examined all the relevant possible worlds where Caesar exists on the far side of the Rubicon, and so on, but found none on which Caesar refrained from crossing, it follows that Caesar had to cross the Rubicon: "Caesar crossed the Rubicon" is a necessary truth.

The story may seem rather fanciful, and one is excused for having questions about the notion of a "possible world" or for protesting that it would be ridiculous to try to settle such a question that way. Those protests are beside the point. Rather, the issue turns on figuring out, given the story roughly as I have told it, where is Kaplan's problem? The story assumes that when we look into a possible world through our machine, we have no trouble finding and viewing Caesar, to watch what he will do. Perhaps the machine can home right in on him, but how do we know that the machine is functioning properly? It seems that we *assume* that the person we view in the other possible world is Caesar, the very same man as Caesar in the actual world, on the basis of the possible Caesar's *similarity* to the actual Caesar: each looks roughly the same, is balding, has an aquiline nose of the same shape. They do not have to look exactly the same in order to be the same person, but there must be a conclusive degree of resemblance. If a woman looking like our Margaret Thatcher appeared leading the army and deliberating in our Jules-Verne-o'Scope, we would not consider what she does relevant to determining what Caesar might or might not do. She would be dissimilar to the actual Caesar to the point of being a different person.

OK, you might think, but I still don't see the problem. The trouble is that trusting "rough similarity" is no good in settling modal questions, since it is insufficient to settle whether the individual we consider in the possible world *really is* the actual individual in whom we are interested. What if the man in the scope who looks just like our Caesar is actually Caesar's twin brother? Surely it is possible he had a twin brother who did roughly what he did in the actual world, while he stayed home. What if in the other world he was a woman? For all we know, the very human we call Caesar could have developed differently in the womb into a woman. In order to settle modal questions, we must know whether the individuals we consider in other possible worlds are the same as those in the actual world. What Caesar's twin could do will not help settle what Caesar can do.

Thus, what determines whether we have the same individual in our scope as an individual in the actual world? Kaplan writes,

> There seems to be some disagreement as to whether we can meaningfully ask whether a possible individual that exists in one

> possible world also exists in another without taking into account the attributes and behavior of the individuals that exist in the one world and making a comparison with the attributes and behavior of the individuals that exist in the other world.[79]

Perhaps qualitative similarity will not settle all cases. In that case, two individuals in different possible worlds may be exactly alike in terms of their qualities, relations, and so on, and yet may be different: they may be exactly alike, and yet this one fails to be the same individual as that one. And qualitative dissimilarity between individuals on different possible worlds may not settle whether the individuals are in fact different, as we saw with the Thatcher-like woman and Caesar. If we think "it does make sense to ask—without reference to common attributes and behavior—whether *this* is the same individual in another possible world . . . and that a common 'thisness' may underlie extreme dissimilarity or distinct thisnesses may underlie great resemblance," we believe in Kaplan's Haecceitism.

Kaplan's Haecceitism is principally a thesis about what settles whether individuals in different possible worlds are really the same or not. For any two individuals in any different possible worlds, regardless of what properties or relations they have, if and only if they have the same "thisness," they are the same individual. On this theory, so far as it has been developed, Socrates in the actual world may be the same thing as a line in another world or a sneeze in a third. The only relevant consideration is whether Socrates, the line, and the sneeze have the same "thisness."[80]

As such, Kaplan's haecceities do not do the metaphysical job of Scotus' haecceities: they do not *cause* natures to become individual. Thus, they are not principles of individuation in Scotus' sense. Kaplan's problem is different. Nevertheless, Kaplan's problem does raise an issue for Scotus: could Socrates' haecceity, in Scotus' sense, go with a pen-cap body, say, so that the pen-cap is Socrates? Conceding that this is outside the order of natural possibility, is it even outside the exercise of God's absolute power? If so, why?

The question of whether or not the pen-cap could be Socrates is settled, in a sense, by Scotus' theory of the categorical hierarchy. Kaplan's haecceities are detached from anything like a categorical hierarchy. For Scotus, all possible individuals, even merely possible individuals, are ranged with their haecceities under the lowest species of the categorical hierarchy. Thus, if the pen-cap Socrates is a real possible individual, as opposed to a really impossible fiction, it will appear in the categorical hierarchy, under some species; I am unsure about how to settle whether a pen-cap Socrates appears there. However, just in case it appears there, it is a really possible individual, while if it does not, it is a real impossibility.

V Contemporary Criticism of Scotus' Haecceitism?

As we have seen, despite the fact that contemporary metaphysicians do not shy from invoking Scotus' name or his term "haecceity" in employing a notion of thisness, they do not have Scotus' notion of haecceity in mind. Thus, it should come as no surprise that they do not directly criticize Scotus' notion. Nevertheless, criticism may spring to mind from the fact that Scotus' haecceities resemble bare particulars, and bare particulars have indeed come in for criticism. However, I argue that the characteristic criticism of bare particulars, in Sellars and Loux, despite appearances, does not transfer to Scotus' haecceities; they emerge unscathed.

A Sellars

Bare particulars play a dual role as both individuators and substrata, or bearers of properties. This might *seem* to establish haecceities are a variety of bare particular: surely they are individuators, and in addition, they might be said to bear the common nature as a property.[81] Moreover, the notion of a bare particular, as developed by Allaire in a series of articles,[82] is meant primarily to answer concerns about individuation in terms of numerical diversity.

Consider two red discs, *a* and *b*. They share all of their pure properties, and yet are numerically distinct. How is that possible?[83] As "indiscernibility with respect to constituents entails numerical identity,"[84] and in having the same pure properties, they have the same constituents, they must be exactly the same thing. But, by hypothesis, that is not so. Thus, the discs must have an additional constituent, one that is not a pure property. Allaire calls this the *bare particular.* It explains how a and b can be numerically distinct from each other. Moreover, it is that to which the pure properties of a thing belong to. That is, it serves as a substratum as well.

However, the notion of an entity combining the roles of individuator and substratum is suspect. According to Wilfrid Sellars, the notion of "bare particular," that happens to be used by Allaire, is incoherent. Sellars writes, "Perhaps the neatest way in which to expose the absurdity of the notion of bare particulars is to show that the sentence 'Universals are exemplified by bare particulars' is a self-contradiction."[85]

A bare particular has no properties, yet in that to which it belongs it functions as a substratum, a bearer of properties. It follows that, admitting bare particulars, one admits "[i]f a particular exemplifies a universal, then there is no universal it exemplifies."[86]

Whatever response a bare particular theorist may make to Sellars' position, a scotist need not be troubled by Sellars' criticism. Although it plays the role of individuator, a haecceity does *not* play the role of substratum. Thus, it does not function for Scotus as a bearer of properties; it instantiates nothing and is informed by nothing. If a bare particular's dual role raises problems, those problems are not the haecceity's. Therefore, Sellars' complaint does not arise for the scotist.

B Loux

Nevertheless, *pace* the notion of a bare particular as substratum, the notion of a bare particular as a bare individuator strikes some as objectionable. Loux writes that

> the problem is rather that the concept of an object which in itself lacks all characteristics is incoherent; [a] for we cannot say what we mean by such an object unless we do, in fact attribute a characteristic to it—the characteristic of being in itself without all characteristics.[87]

Loux brews a cogent objection here with [a], but it is not completely distilled in the text. He is best construed as saying [a]', namely: an entity lacking all characteristics has the characteristic of lacking all characteristics. "Lacking all characteristics" cannot be a property of anything, yet it would be a property of a thing that lacked all characteristics. Thus, on pain of absurdity, everything must have at least one property. Loux (1978) has another, similar criticism of bare particulars. They are supposed to "exemplify" no properties essentially. However, Loux writes, "every entity that is bare has at least one property essentially," as "the property of having no properties essentially is itself a property that is essential to anything that has it."[88]

But [a] from Loux' text is unclear: what does our ability or inability to say what we mean have to do with the way things are? If Loux is serious about inferring a result about how things are, say that there can be no bare items, from our inability to say what we mean in a certain case, for instance that an item lacks all characteristics, he owes us an argument that he does not give, linking the two. *Prima facie*, our inability to say something might stem merely from a limitation in our cognitive capacities. Nobody is able to count and speak the name of each integer, yet that does not imply the integers are finite in number.

If Loux' criticism of the bareness of bare particulars is cogent, one might suspect that it will function as a cogent criticism of haecceities as well. As we have seen for Scotus, haecceities are absolutely simple. But is that suspicion correct? I suspect not. The simplicity of haecceities implies that they are without any parts, and that they themselves are not contracted common items. That is, their simplicity has to do merely with an absence of constituent parts, *not* an absence of properties in the contemporary sense of "property." If Loux-style criticisms are to work against haecceities, they must be targeted at a simplicity denying constituent parts, not merely at a simplicity denying properties. For all we know, haecceities may have properties in the contemporary sense, assuming there are such properties, as they will not be constituent parts of that to which they belong.[89]

On the other hand, if one insisted that properties should count as parts of those things to which they belong, a scotist could take either of two courses in response. First, he might deny that a "lacking all properties" is a genuine property. It may be a genuine predicate, but it does not follow from a thing's being a predicate that it is a property. Thus, Loux owes an argument for considering it as a genuine property. Second, the scotist might say that if the haecceity had a property, although that property would be a part of something, it would not be a part of the haecceity itself. Unless the property is essential to the haecceity, the scotist may hold that the haecceity and the property together form a third thing, an accidental whole X, distinct from the property and from the haecceity. Thus, the haecceity would retain its simplicity.

I conclude that although bare particulars should answer to criticism made by Sellars and Loux, these criticisms do not affect the coherence of Scotus' theory of haecceities. Scotus' haecceities are not bare particulars, as they do not play the dual role of substratum and individuator; they only perform the latter function. Nor is the simplicity of haecceities one that would forbid them from having properties in the modern sense, as such properties would not be parts of the haecceity. Even if one held they were parts, still one would have to show that they were essential to, and not merely necessary to, the haecceity in order to impugn its simplicity.

Chapter 5

Responses to Objections

One might resist the idea that Scotus had a mereological conception of substance either from concern that Scotus believed substance could not be reduced to matter and form or—I believe—from reflection on his incarnational theology. The first source of resistance might be elaborated this way:

(1) Mereological wholes are nothing over and above their parts;
(2) Scotus' composite substances are each something over and above their parts;
Thus, (3) Scotus' composite substances are not mereological wholes.

The conclusion, (3), would suggest my account of Scotus—committed as it is to giving Scotus a mereological notion of composite substance—is flawed. I am happy to concede (2)—as Cross has argued, Scotus was an anti-reductionist about substance, holding that some proper entity belonged to substances of themselves.[1] On my view, a material substance for Scotus is a mereological whole, of which the individuated matter and particular substantial form are proper parts. Agreeing that Scotus held (2) while he also held (1), it seems I would be committed to attributing a fundamental error to Scotus' account. My interpretation would incur a certain burden of proof: for example, why prefer my interpretation, other things being equal, to others which do not attribute such an error to him? While the burden, for all I know, might well be discharged if my interpretation did have to bear it, it is not a burden that I believe my interpretation in fact must bear. While I am happy to concede (2), I deny that Scotus held (1). If I am right, then (3) would not logically follow from (1) and (2), and the first line of objection would be neutralized.

Denying that Scotus holds mereological wholes are nothing over and above their parts, I attribute to Scotus the view that mereological wholes are—in some sense to be spelled out—something over and above their parts. Such an attribution may be troubling because mereology is widely thought of as implying that mereological wholes are nothing over and above their parts, that any group of items are parts of a whole. That is, mereology, the thought might go*, is just* the account of parts and wholes that countenances wholes surviving, say, physical separation of the sort portrayed in the curtain rod example, discussed below. Mereology—or better, Classical Extensional Mereology (hence "CEM")—does not require a special type of unity from its wholes. Indeed, it does not require any special condition to be fulfilled of items for them to count as parts of a whole; it is enough that they exist for them to make a sum. Thus, taking mereology as CEM, one might think the intuition or conviction that one should posit a relation of joining, say, to explain why parts go together to make a whole is wrong-headed. I seem to have attributed to Scotus a confusion, if not an outright error, about mereology. Perhaps it follows that where he talks of composition, parts, and wholes, we should take him to be doing something else other than talking in terms of mereology.

Indeed, Lynne Rudder Baker makes a similar point in arguing that constitution is not mereological. She seems to imply—wrongly I say—that if constitution does not satisfy CEM, it cannot be mereological. By using "constitution," she seems to refer in general terms to relations between items and their constituents of widely diverse sorts; one might reasonably seek to apply what she has to say about constitution to the relationship between a composite material substance and its constituents, form and matter. She writes "Several philosophers have urged me to define 'constitution' as a mereological relation,"[2] but she resists taking constitution to be mereological for two reasons. First, she says "I do not think that there is any such relation as 'the part-whole relation'."[3] "Part" and "whole" are used in divergent senses, she claims, even for material things. For instance, the signature on a check is a part of it in a different way from a piece of it that might be ripped off. Thus, she says "I do not see how there can be a philosophically illuminating theory of a single relation of part to whole."[4] Second, she considers mereological talk misleading; she says "I think all the standard mereological theses—mereological supervenience, mereological essentialism, mereological extensionality, mereological universalism—are false," so that way of talking is of little use.[5] These reasons might be representative of why others resist, or might resist, appealing to mereology to explain the structure of material substance according to Scotus.

One might grant the point about CEM, but respond by holding that not every coherent account of parts and wholes is as strong as CEM. Talk of wholes construes wholes according to different constraints depending on the wholes in question. Scotus, it seems to me, uses "whole" in a wide sense, reminiscent of CEM, as well as in a variety of narrower but analogous senses.

On my reading, Scotus is committed to holding that mereological wholes may be something over and above their parts on account of his peculiar ontology. What could he have meant? There is one way of trying to make sense of Scotus, a way that might be tempting as it is rooted in Aristotle's metaphysics of substance, and Aristotle was a major philosophical influence of Scotus'. Picture a particular curtain rod *A* two parts fitted together so that a whole might be assembled. Segment *B* of the rod is part of it, as is segment *C*. But, say, *B* might have existed without the other part *C*—the other part, *C*, might never have been produced. One might suppose that the whole requires in addition to *B* and *C* a relation *R*, to the effect that *B* and *C* are joined. The basic idea is that it does not follow from the parts of a whole being what they are that they belong to exactly this whole as its parts. That is, the fact that the parts belong to this whole may be contingent to those parts—allowing for cases to the contrary. On the basis of the possibility of such contingency, one might think in those cases the parts would have to bear some relation whose existence is an addition to the existence of the parts themselves.

Take the parts of the curtain rod to be analogous to the parts of a material substance, namely matter and form. The basic idea would be that the substance is something over and above its parts on account of a relation that must go with them, binding the parts together. Thus, matter and form would together compose a material substance from their being related. In this picture, the relation is conceived of as an additional entity: something distinct from the parts. That is not really how Scotus sees things; I am just giving an illustration of how someone other than Scotus might think the whole is something over and above the parts in the case of a composite substance.

I believe Scotus would have resisted such a picture, as he could have seen, from having read Aristotle that it would lead to a regress and his metaphysics gave him conceptual resources from which to construct a cogent alternative theory. Aristotle had argued that just as what unites the letters *A* and *B* to make the syllable *AB* cannot be another element, like a letter, but must be an item of another type, so what unites the material parts of a substance—flesh and bones—together to make a human body cannot be another material element, but must be an immaterial item, a form. Aristotle wrote:

> Now, a composite is composed of something in such a way that the whole thing is one, not as a heap is, but as a syllable is. A syllable is not the same as its letters—for instance, B and A are not the same thing as BA, nor is flesh fire and earth. For when the components are dispersed, the flesh or syllable no longer exists, though the letters or the fire and earth still do. Hence the syllable is something, and not only the vowel and the consonant, but some further thing; . . .[6]

Aristotle argued that a material substance could not be composed merely of material things, since if it were, there would be no good reason why its unity is any stronger than that of a heap. There must be some additional type of component—not a material thing—that binds them together to make a single composite: the form. Thus, in the case of the syllable BA, one might say it consists in B, A—analogues of the material parts of ordinary substances, and something like the order or arrangement of the letters—an analogue for form. the arrangement or order is not itself a material thing like the letters. the letter or material parts seem to be pictured here as if they were atoms or units sealed off from each other—like billiard balls or grains of sand, where adding another ball or grain will not make a single, unified whole. The form would be unable to serve as a nexus binding material things together if it were another material thing. Now it may seem that Scotus, who considers matter and form to be really distinct entities, will have problem. He seems to picture form as a part of a substance "on the level" with the matter of the substance, like *A* and *B* or the material elements in Aristotle's example. It seems Scotus—apparently unlike Aristotle—must take matter and form to stand in relation to each other in the way one billiard ball or grain of sand to others. Thus, Scotus will have to answer the question "*How can matter and form be united?*" without appealing to, say, another form.

And so, it may seem tempting to say on Scotus' behalf that *a relation* joins the matter and form, uniting them into one substance. But appealing to relations will not help much, as the relation, being real, would count as a distinct entity. Should we consider the relation, say R, joining matter and form to be an entity, like the matter and the form, then we shall be obligated to explain how those three could go together to make a single whole substance. We would require yet another relation, say R*, to relate the R to the matter and the form. R* being a distinct entity like R, R* will need to be related to R by still another relation, and so on.

This type of problem is not just an exotic artifact of Scotus' metaphysics; it appears in contemporary accounts of how universals and particulars are united. For instance, D.M. Armstrong notes "a regress that threatens any theory which tries to give an account of what it is for a particular to have a certain character or for two or more things to have a certain relation."[7] On Armstrong's version, picturing a particular having a character through a relation like participation, imitation or instantiation generates an infinite regress, inasmuch as the initial instantiation relation must in turn be related to the particular that has it by a new relation; the same point can be made about the new relation, and so on. Armstrong ultimately dismisses his worry about instantiation generating a regress by saying "what is a difficulty for all theories is a difficulty for none in particular because it suggests that, somehow, the problem can be evaded;"[8] his general idea seems to be that what is a difficulty fro every theory counts specially against no theory in particular.

I do not think Armstrong is right to dismiss the importance of the infinite regress, as it is not clear to me that such regresses really are difficulties for *all* theories of universals and particular things. In particular, I do not think Scotus took the parts of material substances to be joined by relations. Here is precisely where a metaphysics of act and potency can, in my opinion, do some work; we can appeal to it in order to introduce the notion of a union of parts that does not require a distinct relation between them. To the contrary one might, like Cross, claim that Scotus' appeal to act and potency does no explanatory work. Cross writes

> [t]his account might make it look as though Scotus has as explanatory accountof the distinction between a unity4 [the unity of a substance] and a unity1 [the unity of an aggregate]: we explain the difference by appealing to the different sorts of property these different unities can instantiate. But I do not think that Scotus would regard his as a very explanatory account.[9]

The issue, for Cross: "what Scotus cannot answer is: What is it about matter and substantial form in virtue of which they unite to constitute an item which has some properties which are different in kind from any of the properties of its parts?"[10] Indeed, there are references in Scotus that make it sound as if act and potency do little explaining:

> As in general there is no cause why a being is one, nor in this particular case [e.g. of matter and form]. why this being is one in such a way, so also neither is there a reason why from these parts it becomes one in this way except that they are parts of this kind.[11]

However, the fact that Scotus thought his metaphysics of act and potency failed to explain anything *in a particular type of case* does not mean that he thought it did not explain *anything at all.* True, he does not think the unity established by potency and act admits of further explanation; there is, for instance, no further reason why this part is in potency to that act; it just is that way. Or better, it is just a feature of that item's nature, of what it is, that it should be in potency to that act. However, the fact Scotus thinks the fit between acts and potencies is metaphysically primitive does not mean they do no explanatory work. Scotus uses the notions of act and potency to explain how there can be unities between parts without there being a relation between them inasmuch as they are united as potency to act. These notions answer a pressing need; with his notions of act and potency, he can avoid generating a regress in accounting for the unity of a material substance. The matter and form of a substance, each being part of that substance, are each in potency to that substance, which stands as a single act to them. That is, they have their actuality in the act of the substance, not in an actuality of their own. With no actuality of their own, they do not stand apart from the substance as *relata* in need of some distinct relation relating them to the whole of which they are parts. The metaphysics of potency and act enables Scotus to posit a *non-relational* tie between parts of material substances.

Going back to the argument of the first objection, I shall explain in what sense (1)—that mereological wholes are nothing over and above their parts— is false, while (2)—that composite substances are each something over and above their parts—is true. There is a potentially confusing equivocation over "something." The composite and its proper entity are not like the icing on a cake; that entity is not a distinct thing over and above the constituents of the composite. It is rather just their actuality, the actuality of the composite's individual matter and individual form or the actuality of their potentiality to be together in a certain way. In what sense is (2), which implies anti-reductionism about material substances, true then? The actuality of the constituents together is different from their potentiality. There is something about them that is different from how they were before they were actualized. Thus, (2) is true in virtue of the composite having an actuality that its constituents would not have had on their own, apart from any composite. But (2) is true only in a very wide sense of "something," where "something" can refer to an actuality which is not itself a distinct thing.

And (1) can be false in the sense that the actuality itself of the composite will not be a proper part of the composite. It does not add a thing, in the sense of a part, over and above the proper parts—matter and form—that already constitute the composite substance. Thus, in spite of the presence of an additional actuality, there is nothing present with the composite that would make the composite anything more than the sum of its proper parts. It follows one may consistently hold there is a mereological sum, the substance, which nevertheless has something—the actuality—over and above its parts. If the actuality of the composite were to count as a distinct part of the substance, in addition to its matter and form, an absurdity would result. Whereas the actuality of the composite was supposed to be the actuality of the whole substance, since it is distinct from the other parts of the substance, we shall find that it cannot be the actuality of the whole substance. There will be a new composite of the original parts and the actuality of the composite. They will be in potency to being proper parts of a new, larger composite that includes the actuality of the original composite in addition to its own, distinct actuality.

There is another reason why one might resist a mereological interpretation of Scotus on substance, a reason drawn from his incarnational theology. On Scotus' incarnational theology, a person like Socrates was not just the mereological sum of his parts—even in the narrow sense of "sum" seemingly appropriate to his narrow sense of "whole." Socrates being who he was also required that he not be assumed by any person of the Trinity. Thus, the worry would be that a negation would have to go with the parts for them to be united so as to be parts of a substantial whole, and that the parts would not be sufficient on their own. In effect, the argument from incarnational theology is the same as the one above; it differs in giving a different reason for (1). Material substances are not mereological wholes, the objection runs, if something must go with them—a negation—in addition to their parts.

The reply to the second source of worry about my version of Scotus' account of substance will be somewhat different from my reply to the first source of worry. The reply will require some discussion of the Scotus' metaphysics of incarnation; it will draw on what I take to be Scotus' distinction between being a material substance and being a person, a distinction between what we might call, on Scotus' behalf, metaphysical categories. Contrary to what one might have quite reasonably supposed, Scotus—it seems to me—would not say that a material substance is strictly the same as a person. That is, one might have thought that this human person, Mr. X, was—on Scotus' account—just the composite of this matter and this substantial form. Scotus denies that. Inasmuch as one and the same material substance of itself is indifferent to being any one of a number of different people, a material substance cannot be identified with a person. That is to say, one and the same composite of form and matter is of itself indifferent to being one person, say Mr. X, and another numerically distinct person, Mr. Y. This form and these flesh and bones could have belonged to Mr. X, and they could have belonged to Mr. Y. Since the material substance of itself possesses an indifference to being different people, it cannot be identified as strictly the same as any one of them. Thus, I may concede in reply to the second source of worry that persons are not mereological wholes, as a negation cannot be a part of a whole except perhaps in a figurative sense, while continuing to hold that material substances are mereological wholes.

The crucial step in my reply to the second source of worry is, I suppose, the claim that one and the same material substance of itself is indifferent to numerically distinct persons. Scotus could argue that this indifference follows from his incarnational theology. Suppose there is an individual composite of body and soul—call it "Z." Z might be assumed by God or it might not be; whether it is assumed or not is up to God. If Z *is not* assumed by God, it goes on to be an ordinary human person, say Mr. X. But if Z *is* assumed by God, it becomes a different person, Mr. Y. As Mr. Y, having been assumed by God, would be a divine person, whereas Mr. X, not having been assumed by God, would not, they cannot be identified.

According to the Chalcedonian formula of the Incarnation (A.D. 451), Christ is one person, the Word or the second person of the Trinity, with two natures, a human nature and a divine nature.[12] Scotus accepted the Incarnation as something to be believed as an article of faith:

> As for the first point [sc. what type of unity must be posited in the Incarnation], it is an article of faith that human nature is personally united to the Word. "The Word was made flesh," (John 1) where "flesh" means man, according to Augustine. Also various creeds or formulas of faith assert the truth expressly.[13]

The Chalcedonian formula indicates a certain type of unity between God and the human nature of a Jesus, called the hypostatic union, which I will clarify in Scotus' terms, my point being to motivate

Scotus' distinction between being a material substance and being a person.

Scotus holds that a threefold dependence is proper to each individuated creaturely nature, or substantial form: (1) actual, (2) potential, and (3) aptitudinal.[14] Scotus compares aptitudinal dependence to—what he took to be—the natural tendency of a heavy body to move toward the center of the earth. The center is "where it would always be, in as much as it is of itself, unless it is impeded."[15] Given that natural tendency, a heavy body will always move toward the center. It will fail to move toward the center only if it reaches the center and is located there, or something prevents it from moving toward the center—as when one catches a ball just after it was thrown upwards. There is an active power in the heavy body which is exercised just in case the thing is disposed to be in some place where it is actually not located. But when it reaches and occupies that place, it no longer exercises its active power of motion toward that place.

What is it for an aptitude to be negated? When the heavy body reaches the center and remains there, its natural power to move to the center is negated. That is to say, its natural disposition toward being in the center just was active power. When it ceases to exercise its power, that power no longer exists; it is no longer actual. If the heavy body is moved away from the center, its disposition is "restored," in just the sense that it will actively exercise a power to move toward the center.

How does all this concern the individuated nature? Suppose an individuated nature is not a person. In the uninterrupted course of nature, a person follows on an individuated nature. Taking the individuated nature in precision, alone and apart from personhood, it has a natural disposition toward being a person. Being a person is like the center toward which the heavy body moves. The negation of this disposition is part of what is required to be a person, in the sense that is it no longer actual once the nature is a person. The individuated nature, having become a person, is complete and no longer has a disposition toward becoming another person. It is "at rest," so to speak, in its own "subjecthood." That is what it means for a created person's aptitudinal dependence to be negated. Thus, Scotus sees the negation of aptitudinal dependence as a necessary condition of being a person.

What is meant by the *actual* dependence proper to an individuated nature, and its negation? Scotus gives the example of a surface.[16] The surface itself is neutral between colors that may inhere in it, say, white and black. Some color must inhere in it; let us say for simplicity's sake that white and black are the only available alternatives. It does not matter which of the colors inheres in it, but the surface cannot be colorless in any event. When the surface has one color, its actual dependence on one color is confirmed, in the sense that it actually depends on the color it has for its being colored. Its dependence on the other color is "negated," in that, (1) it cannot have both colors, white and black, at once, and (2) if it has one, it does not have the other.

An individuated nature is *neutral* between depending on a divine person for its completion, where it becomes a person from being an individuated nature, or being complete in itself, according to the mere order of nature. It cannot depend on both. An individuated nature cannot be a person both from the order of nature and from depending on a divine person. Thus, if it actually is a person from the order of nature, its dependence on a divine person is negated.

The negation of an individuated nature's actual dependence is necessary but notes "the negation of actual dependence alone is insufficient for being a rational person."[17] However, Scotus holds that the negation of these two dependencies, namely the aptitudinal and actual dependencies, is sufficient for an individuated nature to become an actual, created person. This twofold negation of an individuated nature's dependence adds no positive entity to it, as what would be "added" are merely negations, and negations themselves are not positive entities.

But dependency in sense (2) above, namely potential dependence, is never negated, even when the individual composite goes on, according to the order of nature, to become a person. Scotus characterizes this potential dependence of the individual composite as "*obediential*." That is, it is a potentaility outside the order of nature that answers only to the active power of divine omnipotence. He means that any individual composite, as a creature, can have its development toward being a person in the order of nature interrupted, as it were, by divine active power. Instead of becoming a complete person in itself, according to the order of nature, the individuated nature becomes a person by depending on a divine person from an act of omnipotence. That is, an individuated nature becomes a person by having its natural drive toward being a complete subject terminated by its entering into a relationship with a divine person. The individuated nature is related to the divine person only because the divinity exercised its active power. The individuated nature's relation to a divine person, according to which the individuated nature is completed as a person, is the relation of the individuated nature being assumed by a divine person.

Scotus claims this potential dependence on a divine person is retained and never negated in created natures, even when the individuated nature, in the course of nature, goes on to be naturally completed as a person. What could he mean by that ongoing potential dependence, even in a created person? I speculate that the individuated nature retains an entity in itself *indifferent* to completion by dependence on a divine person, and natural completion as a created person. This indifference is retained by the individuated nature, even when it is a completed person. How is that possible without contradiction? The indifference of the individuated nature is retained in an instant of nature prior to its being a completed person. The fact that it is a completed person actually precludes the individuated nature from entering into a relation of dependence on a divine person. But this preclusion is merely actual—it is not necessary. That is, any individuated nature that is actually a person could have had its natural development interrupted by an act of omnipotence. The fact that it could have had its development interrupted is reflected in the indifference retained by the individuated nature in a prior instant of nature.

Scotus' incarnational theology might be thought to present a problem for my reading of Scotus inasmuch as my reading of Scotus takes him to understand substances as mereological wholes. It seems for Scotus a person cannot be a whole of which the individuated nature is a part. As the person and the individuated nature are not simply the same, the individuated nature is not an improper part. But it is not a proper part either, since if it were there would have to be some other item different from the individuated nature which would be a proper part of the person in addition to the individuated nature. In denying that any positive entity goes with the individuated nature to make a person, Scotus denies that there would be any additional proper part. It is enough for an individuated nature to receive the twofold negation of its aptitudinal and actual dependencies for it to be a person, and these negations are not entities that could be proper parts.

Indeed, I concede that a mereological approach will not work to clarify Scotus' account of the relationship between persons and their individuated natures, as the whole-part relation does not seem to apply in this case. Nevertheless, I maintain that a mereological approach does clarify Scotus' understanding of material substances or, what is the same, individuated natures. Once one draws a distinction between the composite of individual matter and form—the individual nature or material substance—and the person, one may consistently apply a mereological analysis to material substances without applying it to persons. Thus, I hope to have replied here to two sources of objections to my mereological account of Scotus' theory of material substances: one from the nature of the composition of material substances, and another from Scotus' metaphysics of the Incarnation.

Before closing and leaving the topic of Scotus' metaphysics of the Incarnation, I would like to make a brief case for its relevance, prima facie, to contemporary efforts to understand the Incarnation in philosophical theology. In particular, I wish to emphasize how much Scotus' understanding of the Incarnation deviates from well known contemporary understandings, even those that are sympathetic to the substance ontology Scotus employs. The distinction between being an individual nature and being a person, which Scotus operates with, is absent in each of Morris and Stump's expositions of the metaphysics of the Incarnation, and in Alston's account of the unity of persons in the Trinity.

Alston[18] mounts a qualified defense of substance metaphysics as a means for the formulation of the dogma of the Trinity; he is by no means hostile to the general metaphysical framework within which Scotus defends Christian dogma. Yet, we shall see Alston's use of substance metaphysics, lacking the distinction between person and substance that Scotus would have noted, is insufficient. For Alston, Aristotle in the *Categories* and *Metaphysics* is the “fountainhead” of substance metaphysics, the “original source of the substance terms employed in these formulations [sc. those of the Christian creeds],” and “the best place to find the concepts expressed by these terms.”[19] Thus, Alston says, “Substance metaphysics does not enable us to resolve all the difficulties inherent in the doctrine, but neither does that metaphysics hamper us in our attempts to deal with those difficulties.”[20] In particular, the metaphysics Alston finds in Aristotle cannot explain how, according to Christian dogma, the three persons of the Trinity are one in substance.

From Aristotle, Alston takes two notions of “substance,” namely (a) substance as that which underlies and bears properties, and (b) substance as a thing’s natural kind or its species.[21] Substances in sense (a) are the primary substance of *Categories* 5, “the individual man or horse” that is “neither predicable of a subject nor present in a subject.”[22] A primary substance “is the individual bearer of an essence and properties . . .”[23] Substances in sense (b) are the secondary substances of *Categories* 5, the species and genera predicable of primary substances, as the species “human being” is predicable of the primary substance “Socrates” in “Socrates is a human being.” A secondary substance is “. . . the essential nature that makes the individual a [primary] substance.”[24] Applying the terminology of Aristotle’s metaphysics to the claim of the Nicene Creed that the persons of the Trinity are three different hypostases or persons of one substance with each other, Alston suggests we follow the early Church Fathers in taking each person to be a substance in sense (a). According to the Fathers, “*Hypostasis* is used for any real individual substance; and its Trinitarian employment was chosen for the sake of real individuality, not anything distinctively personal [sc. “personal” in the sense of merely subjective].”[25]

But in what sense of “substance” is each person of one substance with the others? Neither sense (a) nor sense (b) is plausible. If they are of one substance in sense (b), then they are of one substance just in sharing one essential nature. But then the persons of the Trinity are no more unified than Julius, Crassus, and Pompey, contrary to what dogma demands. To avoid a charge of tritheism, the divine persons must be unified in one substance in a stronger sense than substance in sense (b) permits. On the other hand, it is difficult even to make sense of the persons being one substance in sense (a), as substance in sense (a) is individual. Alston sees Augustine trying to make sense of the persons being of one substance in sense (a) with an analogy to three different statues being made out of one lump of gold: the gold is to the statues as the divine substance is to the divine persons. But Alston claims divine persons in no sense are made out of divine substance: "it simply does not seem at all appropriate to think of incorporeal persons being constituted of any material or stuff."[26] We need some further indication from Augustine of how the divine substance is "stuff-like." Thus, the substance metaphysics of Alston's Aristotle is without sufficient resources to explain the unity of the divine persons in one substance.

Alston needs another sense of "substance," namely one to which both individuality and communicability are proper. The divine substance shared by the persons cannot be universal or common like the nature "being human," so it must be individual. Yet, the divine substance cannot be individual like a creature, since then the divine substance could not be communicated to a person. However, we have already spoken of a type of entity in the metaphysics of Aquinas and Scotus that is both individual and communicable, namely the individual human nature that, on the one hand, is not a person, yet, on the other hand, can be communicated to a person. Just so, the divine nature is individual and communicated to a person, say the Word. Thus, were Alston to draw the distinction between being an individual of a nature and being a person within metaphysics as Scotus had done, he would have the resources to begin to make sense of the unity of the divine persons in one substance.

A second contemporary, T.V. Morris,[27] seeking to defend the doctrine of the Incarnation from incoherence, falls into incoherence. Morris regards the human nature assumed by the Word as a set of universal properties. All human beings have this set in common; it is the very human nature whose possession or instantiation is a necessary and sufficient condition for being human. Morris does not have an account of an individuated human nature, which is not actually a human person, suitable for assumption; his ontology omits just the type of entity needed to render his account of Incarnation coherent.

A universal human nature cannot be assumed without absurdity; only an individual nature can be assumed. If an actually universal nature were assumed by God, then each human being would be assumed, which is absurd. For the nature *human* in each human being is the substance of each human being, that which causes her to be the kind of thing she is. As Morris conceives of that substance being actually universal, the *assumed* nature humanity is the substance of every individual human.

Some of Stump's work on the Incarnation runs into the same difficulty Morris ran into. Stump's exposition of Aquinas' metaphysics of the Incarnation is, on Scotus' standards and Aquinas' as well, incoherent. Although she claims "It is also *not* part of my purpose to show that Aquinas' interpretation is completely intelligible and coherent or philosophically defensible in every respect,"[28] the incoherence I find in her exposition is not part of Aquinas' interpretation, but rather part of her interpretation of Aquinas. It seems that interpretation of Aquinas is at fault in failing to draw on the distinction between being an individual nature and being a person.

In the Incarnation, Stump claims "At a certain moment in time, the second person of the Trinity assumed a human nature."[29] She explains the Word's assumption of a human nature by saying that "when the second person of the Trinity assumes human nature, he assumes a particular substantial form and the matter it configures."[30] The substantial form and the matter it configures are each proper parts of a whole, the human nature. Strictly speaking, only that whole, the human nature, is assumed by the Word; there is not one assumption of the whole and separate assumptions for each of the proper parts. Thus, it is wrong to strictly identify the particular substantial form and the human nature: the form is a proper part of the human nature. She claims that "for Aquinas, the nature of a material substance is conferred [to the suppositum] by a substantial form which is an individual."[31] Surely *prima facie*, the substantial form cannot be strictly identical with that which it confers, namely the nature. It follows that one ought not to infer the particularity of the human nature that the Word assumes from the fact that the human nature is identical with the particular substantial form. According to Stump, is the human nature that the Word assumes particular?

No. She writes:

> Aquinas designates the collection of the species-conferring properties a thing has in virtue of having a substantial form of a certain sort with the Latin term translated ‘nature’. The nature of a thing is what is signified by the species name of the thing, and a thing’s nature is given by its substantial form.[32]

By “nature” she thinks Aquinas means a collection of properties. One collection of properties is signified by the species name “human,” another by the species name “horse,” and so on. One might wonder whether each collection is a particular item, but Stump’s language lays such wonder to rest. She writes “The human nature of Socrates is the same as the human nature of Plato insofar as they are both human beings.”[33] Since the human nature of Socrates is the same as the human nature of Plato, it follows that they have exactly the same collection of species-conferring properties in common between them. Thus, that collection cannot be a particular, as it is not divine nature.[34] As it is unclear whether she would say it is universal or common, I will say that it is non-particular. One may claim the Word assumes the substantial form, but that is to use “assume” in a derivative sense. The substantial form is assumed only in the sense that substantial form is a proper part of the whole, the human nature, and that human nature is assumed. Thus, when she speaks of “the substantial form assumed by Christ,” she uses “assume” in a derivative sense.

In Stump’s more recent work on Aquinas and the Incarnation, she says that the nature assumed by the Word is particular:

> For Aquinas, the nature of a material substance is conferred by a substantial form which is individual . . . So when the second Person of the Trinity assumes human nature, he assumes a particular substantial form and the matter it configures.[35]

However, difficulties with this more recent move persist. The universal essential features human beings distinctively have in common, which make up the nature *human,* are passed on from the nature to the individual substantial form without that nature being actual. But how can a set of universal, essential features be borrowed from a human nature that does not exist? The nature would have to be universal if it were actual, but no actual thing can be universal; universals, for Stump's Aquinas, are merely conceptual, not actual. If so, then the nature from which the universal properties are borrowed is, strictly speaking, a nonexistent causal principle–for Scotus, an absurdity.

I have argued that my account of Scotus' answer to the problem of universals, and its commitment to a mereological theory of substance, is a correct interpretation of Scotus, and that it is plausible taken in itself. What I have called Scotus' commitment to a mereological theory of substance may seem objectionable, inasmuch as Scotus seems to have thought that substance was irreducible to its components, matter and form. Nevertheless, his commitment is, I believe, defensible; Scotus would have been able to refute these objections. In all of this, what I have offered is like a rough map that might be used as a guide for future travel, that might help travelers get where they wish to go, that might help orient them in their surroundings. The details of the map need to be filled in, but it remains a reliable guide nevertheless. Just so, I aspire to offer a reading of Scotus that can be used as a guide for further research, a guide by which readers may find their bearings.

Notes

Chapter 1

[1] J.P. Moreland, *Universals* (Ithaca: McGill-Queen's University Press, 2001), p. 169.

[2] Laurence Goldstein, "Scientific Scotism," *The Australasian Journal of Philosophy,* v. 61, 1983.

[3] Hilary Putnam, "Pragmatic Realism," (1987) in *Metaphysics: An Anthology,* eds Jaegwon Kim and Ernest Sosa (New York: Blackwell Publishing, 1999), 591–606, p. 599.

[4] Nelson Goodman, *Fact, Fiction, and Forecast* (Cambridge: Harvard University Press, 1955), p. 40.

[5] W.V.O. Quine, "Natural Kinds," (1969), in Kim and Sosa *supra,* p. 241.

[6] Scotus, *De Primo Principio* (St. Bonaventure: Franciscan Institute Publications, 1966), 2.45. He claims a pedigree for the principle: "apud Aristotelem satis notam."

[7] From H.H. Price, *Thinking and Experience* (London: Hutchinson's University Library, 1953).

[8] Armstrong, *Universals* (Boulder: Westview Press, 1989), ch. 1, and Moreland, *Universals* (Montreal: McGill-Queen's University Press, 2001), pp. 1–4.

[9] Armstrong, ibid.

[10] I am employing Panyot Butcharov's example from his *Resemblance and Identity* (Bloomington: Indiana University Press, 1966), pp. 56ff.

[11] On Quine's call for semantic ascent, see his "On What There Is," in Properties, eds Mellor and Oliver (Oxford: Oxford University Press, 1994) and his *Word and Object* (New York: John Wiley and Sons, 1960), pp. 271–2. For Armstrong , see his *A Theory of Universals* (Cambridge: Cambridge University Press, 1978), v. 1, pp. 12–16. Note also the work of Devitt, "'Ostrich Nominalism' or 'Mirage Realism'?" (1980), in Mellor and Oliver *supra.*

[12] Quine, *Word and Object* (New York: John Wiley and sons, 1960), p. 271.

[13] Quine, "On What There Is," in Mellor and Oliver *supra,* p. 74.

[14] Ibid.

[15] Armstrong, "Against 'Ostrich Nominalism'" (1980), reprinted in Mellor and Oliver *supra,* p. 105. My discussion of Armstrong is informed by his debate with Devitt *supra.*

[16] Michael Loux, *Metaphysics,* (New York: Routledge, 1998), pp. 25–6.

[17] Devitt, "'Ostrich Nominalism' or 'Mirage Realism'" in Mellor and Oliver *supra,* 93–100.

[18] For his part, Armstrong is careful to emphasize the "*prima facie*" character of the purported reference of "F" to a universal. In general, he recognizes there are *not* properties for every predicate, so that what is initially *prima facie* evidence turns out to be in large measure mistaken, with no universal corresponding to the predicate in question in many cases. For instance, Armstrong, though he is a realist, would deny that there is a universal for a shade of red corresponding to the predicate "red."

[19] William P. Alston, "Ontological Commitments," *Philosophical Studies*, v. 9, 1958: 1–2.

[20] Ibid.

[21] Armstrong, "Against Ostrich Nominalism," in Mellor and Oliver *supra*, pp. 101–11, pp. 106–7.

[22] David Lewis, "New Work for a Theory of Universals," in Mellor and Oliver *supra*, pp. 188–222, pp. 194–5.

[23] Armstrong, "Properties" (1992), in Mellor and Oliver *supra*, p. 164.

[24] In Mellor and Oliver *supra*, p. 257.

[25] Aristotle, *Physics* II.1, 193b8–9, trans. Waterfield (Oxford: Oxford University Press, 1996). Note that Scotus also infers the existence of a nature from the phenomena of begetting.

[26] Scotus, *De Primo Principio* 3.14, *supra*.

[27] The *Reportata* version translated by M.M. Adams and A. Wolter in *Franciscan Studies*.

[28] Scotus II.3.1.1.28, in *Five Texts on the Medieval Problem of Universals*, trans. P.V. Spade (Indianapolis: Hackett Publishing, 1994). The italics and bracketed numbers are mine.

[29] My choice of term "real disposition" is guided by Armstrong, *Dispositions: A Debate* (New York: Routledge, 1996). In their terms, Scotus holds that the essence or common nature of a material substance is a disposition irreducible to its categorical basis. What counts as the categorical basis of such a disposition will need special exposition, as none of the contributors work with a substance ontology like Scotus'.

[30] Armstrong, "Against Ostrich Nominalism," in Mellor and Oliver *supra*, p. 111.

[31] Kim, "Events as Property Exemplifications," in *Action Theory*, eds Myles Brand and Douglas Walton (Dordrecht: Reidel, 1975).

[32] Lewis, "Events," *Philosophical Papers*, v. 2, 1986.

[33] Davidson, "Causal Relations," in Kim and Sosa *supra*, pp. 428–35, p. 433.

[34] Shoemaker, "Causality and Properties," in Mellor and Oliver *supra*, p. 228.

[35] Lewis, "Causation," in Kim and Sosa *supra*, pp. 436–43, p. 423.

[36] Mellor, "Properties and Predicates," in Mellor and Oliver *supra*, p. 258.

[37] It follows, if what holds for Scotus holds for Aristotle as well, as I suspect, that attempts to spell out Aristotelian essentialism in terms of properties that belong to objects are misguided from the start. For an example of such attempts, consider Ruth Barcan Marcus in "Essential Attribution." *Journal of Philosophy*, v. 7, 1971: 187–202 and Copi's "Essence and Accident," *Journal of Philosophy*, v. 51, 1954.

[38] Witt, *Substance and Essence in Aristotle* (Ithaca: Cornell University Press, 1989), 3, 55. Similar moves are made by Black in his (1968) and Durrant, M., "Essence and Accident." *Mind*, v. 84, 1975: 595–600.

[39] Kung, "Can Substance be Predicated of Matter?" in *Archiv fur die Geschichte der Philosophie* (1978).

[40] Lewis, *Substance and Predication in Aristotle* (New York: Cambridge University Press, 1991), p. 160.

[41] Wedin, *Aristotle's Theory of Substance* (New York: Oxford University Press, 2000), p. 436.

[42] I remind the reader that Lear (1988: section 6.6) does claim that forms are neither particular nor universal, but he is alone in this claim (aside from Owens) and his theory differs markedly from Scotus'.

[43] Scotus, QQ 3.50, trans. Alluntis, Felix and Wolter, Allan B., God and Creatures (Princeton: Princeton University Press, 1975).

[44] It should be noted that Scotus is a nominalist by Nelson Goodman's lights; Goodman claims "The nominalist denies that two different entities can be made up of the same entities" (Goodman, "A World of Individuals," p. 18). Scotus would agree: different individuals must differ at least by some part. We can see Scotus' agreement in the way he handles the problem of individuation, as we shall find below. They adhere to what we might call a principle of constituent identity: items sharing all of their constituents are the same. Of course, Goodman's sense of "nominalist" is not Scotus'.

Chapter 2

[1] I am following David Lewis here, from *On the Plurality of Worlds* (New York: Blackwell, 1986), p. 202.

[2] Ibid.

[3] Ibid.

[4] Ibid.

[5] Mark Heller, "Temporal Parts of Four-Dimensional Objects," in Kim and Sosa *supra*, pp. 312–26, p. 314.

[6] Ibid., p. 313.

[7] Ibid.

[8] Ibid., p. 314. A similar point is made by another friend of temporal parts and perdurance, Quine, in "Identity, Ostension, and Hypostasis" reprinted in *Metaphysics*, 1st Edition, ed. Michael Loux and Dean Zimmerman (New York: Wiley Blackwell, 1953).

[9] Lewis, from "Postscript B to 'Survival and Identity'," in *Philosophical Papers Volume I* (Oxford: Oxford University Press, 1983).

[10] Ibid

[11] Ibid.

[12] Judith Jarvis Thomson, "Parthood & Identity Across Time," in Kim and Sosa *supra*, 301–11.

[13] Ibid.

[14] Heller in "Things Change," p. 701 in *Philosophy and Phenomenological Research*, 1992.

[15] Heller, "Temporal Parts of Four Dimensional Objects," in Kim and Sosa *supra*, 317–18. I have adapted the entire "Bourgeois" illustration from Heller's discussion.

[16] Lewis, *On The Plurality of Worlds* (New York: Blackwell, 1986).

[17] Ibid. An intrinsic property of a thing is one it does not have only as a consequence of a relation it stands in with another thing. For instance, say my sister has a child. My being an uncle is not an intrinsic property of me, since I am an uncle only as a consequence of her action.

[18] I follow the argument of Heller from his "Things Change," here.

[19] Lewis, *On the Plurality of Worlds.*

[20] Ibid.

[21] Ibid.

[22] Ibid.

[23] I am gerrymandering a fairly commonly used argument together from similar considerations in the texts of Heller pp. 313, 320–1 (1990) in Kim and Sosa (1999), Loux' *Metaphysics* (New York: Routledge, 1998), pp. 222–8, and Jubien's *Ontology, Modality, and the Fallacy of Reference* (Cambridge: Cambridge University Press, 1993), pp. 24–6.

[24] I should mention that some interpreters of Aristotle sound as if they assimilate his account of substantial change to four-dimensionalism; I believe they are in the minority. In Charlton's case, he seems to do this in the course of arguing "Aristotle held no metaphysical doctrine which required him to postulate prime matter" (*Phronesis*, v. 28, 1983, p. 210). Charlton criticizes Williams, a prime matter advocate, for working "with tenses in preference to instants: *A* both *was* not and *is f*." Charlton recommends we look at change in Aristotle *via* a theory of instants like the one in Bertrand Russell's work: "Russell said that for *A* to become *f* is for *A* not to be *f* at one instant, and to be *f* at a later instant." Alan Code suggests an explanation of change in Aristotle that involves

> [s]tarting with a domain of instants of time together with a domain of the space-time slices of individual substances, we assign to the phrase "the man" a function which takes points in time as arguments and has for its value the appropriate slice of that man when he exists. (*Philosophical Studies,* v. 29, 1976, p. 366)

Their suggestions are tentative; for instance, they do not explicitly differentiate between the Thompson interpretation of time slices or instants coming into existence *ex nihilo* one after the other, and the Heller interpretation rejecting such successive coming into being. I doubt we need to interpret Aristotle on change as Charlton and Code do. I am confident my criticisms of four dimensionalism would equally apply to developed versions of their reading of Aristotle on change.

[25] 191a27–30

[26] 191b13.

[27] 198b33–5.

[28] 190a10–11.

[29] 191b14–15.

[30] 191b1.

[31] 191b3–4.

[32] Daniel W. Graham, *Aristotle's Two Systems* (Oxford: Oxford University Press, 1988), pp. 135–6.

[33] I am making a tendentious move according to some current Aristotelian scholarship. *Pace* those who deny prime matter altogether, even some of its current advocates do not invoke prime matter to explain substantial change. Robinson ("Prime Matter in Aristotle," *Phronesis*, v. 19, 1974) says Aristotle must posit prime matter to explain elemental change—like that of fire into air: "As there is no identifiable matter more primitive than the elements . . . there is a problem about what underlies such change. The traditional interpretation . . . is that he posits a *prime matter*, a bare stuff, lacking all positive determinations . . ." (p. 168). But in substantial change, "the matter of the change is that which constitutes first the one substance and then the other" (ibid.). Prime matter is not needed here; iron can be the matter surviving the change from an iron sphere to an iron block. But Robinson's example is a bad one. An iron sphere is not a composite substance except in a qualified sense. According to the Thomist view, in something unqualifiedly a composite substance, the form of the composite is necessary to the matter of the composite; it cannot survive without the form. Thus, in the change from one substance to another, the matter of the composite does not survive. The problem motivating the admission of prime matter: How then is the new substance not simply from nothing?

[34] Aquinas, *On the Principles of Nature* 2, trans. McInerny (1998).

[35] Ibid.

[36] Ibid.

[37] Note well the rejections of prime matter as substratum based on its featureless character, devoid of all form and act. Jones writes "'prime matter' has come to seem more and more of a bad joke, the typical illusion of a metaphysician" ("Aristotle's Instruction of Matter," *Philosophical Review*, v. 83, 1974, p. 475). Stahl writes "it should not be too difficult to absolve Aristotle of the charge of believing in something 'characterless,' since the notion of something 'characterless' is absurd" ("Stripped Away: Some Contemporary Obscurities Surrounding *Metaphysics* Zeta," *Phronesis*, v. 26, 1981, p. 177). Charlton writes "I suggest that what is required is not an eternal, featureless substratum, but a robust way of conceiving ordinary materials" (*Physics: Books 1&2*, (Oxford: Oxford University Press, 1983), p. 210). Resistance to the notion of prime matter in Aristotle is partly based on textual considerations, but is also partly based on the conviction that the very notion of a prime matter devoid of any form and act is absurd. I contend in response that their motivation to resist prime matter from the conviction it is absurd is misplaced—one may admit prime matter, devoid of any form, without holding that it is merely a potentiality, without any act. This is Scotus' move. Critics of prime matter may be guilty of neglecting relevant alternatives.

[38] Williams, "Hylomorphism" in *Oxford Studies in Ancient Philosophy*, vol. 4, 1986, p. 197.

[39] Ibid., p. 191.

[40] Kenny, Anthony, *Aquinas on Mind* (New York: Routledge, 1993), p. 149.

[41] Ibid.

[42] Cross, *The Physics of Duns Scotus* (New York: Oxford University Press, 1998), p. 34.

[43] Ibid., p. 41.

[44] *Metaphysics,* VII.17, 1041b9–12, trans. Bostock (1994). I use Bostock below as well.

[45] *Metaphysics,* VII.17, 1041b8–9, trans. Bostock (1994).

[46] On Aristotle's account, neither example is a substance in the primary sense. On his full account, flesh is itself only a material part of a substantial whole, namely a living organism, rather than a material substance on its own. Likewise, as a syllable is a type of artifact, a conventional sign, it is not a material substance in the strict sense either. When he talks here about a syllable or flesh, he is doing the same type of thing here in VII.17 that he does in VII.7–9 when he talks about artifacts, like a bronze sphere, as examples of composite substances. It is not that he considers artifacts, syllables, or flesh to be full-fledged substances. Rather he uses wholes we are more familiar with to illustrate his point: the substantial whole is greater than the sum of its parts.

[47] Scotus, *Philosophical Writings,* trans. Allan Wolter O.F.M. (Indianapolis: Hackett Publishing Corp., 1987), p. 137: Anima intellectiva est forma specifica hominis. Note that Scotus claims we can know this naturally, without recourse to revealed truth: De prima [the previous proposition] dicitur quod est ratione naturali nota (ibid.). The Latin of my Wolter (1987) quotes in this section is from Scotus, *Opus oxoniense,* IV.43.2; the English is Wolters' translation.

[48] Wolter (1987, p. 138): non invenitur faciliter ratio a priori neque a posteriori, nisi ex propria operatione hominis, siquidem forma innotescit ex propria operatione, sicut materia ex transmutatione.

[49] Having no use for it here, I leave the additional point of a Porphyrian property's being non-essential aside.

[50] Wolter (1987, p. 139): Homo intelligit formaliter et proprie; ergo anima intelectiva est proprie forma hominis.

[51] Wolter (1987, p. 144).

[52] Wolter (1987, p. 141)

[53] Wolter (1987, p. 142)

[54] Wolter (1987, p. 142): quodam sensu, id est, perceptione interiori, experimur istos actus in nobis.

[55] Ibid.

[56] Wolter (1987, p. 142): quodcumque istorum cognoscere est impossibile cuicumque potentiae sensitivae.

[57] Ibid.

[58] Cross develops this criticism in the third chapter of his recent work, *The Physics of Duns Scotus* (New York: Oxford University Press, 1998), pp. 34–46.

[59] Scotus, Ord. II.12.2.3: dico quod non est contradictio materiam esse sine forma quacumque substantiali et accidentali (*Opera Omnia,* vol. VI.2, Georg Olms Verlagsbuchhandlung: Hildesheim, 1968).

[60] Ibid., Ord. II.12.2.4: Confirmatur, quiquid contingenter se habet ad quodlibet cuijuslibet generis absoluti habet se contingenter ad illud genus absolutum, hoc patet; sed material contingenter se habet as quamlibet formam, ergo et contingenter se habet ad totum genus formae.

[61] For Scotus, the first three of Aristotle's categories—substance, quality, and quantity—are logical concepts under which absolute things are classified; the rest of his categories are logical concepts under which relative entities are classified.

[62] Ibid., Ord. II.12.2.3: Item quiquid Deus absolutum facit in creaturis mediante causa secunda, potest facere sine illa causa secunda, quae non est essentia causati. Sed forma est causa secunda, quae non est de essentia materiae, inquantum material est, mediante qua Deus dat esse materiae; ergo Deus sine illa potest facere materiam.

[63] It follows, if what holds for Scotus holds for Aristotle as well, as I suspect, that attempts to spell out Aristotelian essentialism in terms of properties that belong to objects are misguided from the start. For an example of such attempts, consider Marcus in her "Essential Attribution" (*The Journal of Philosophy*, v. 68, 1971, 187–202) and Copi's "Essence and Accident" (*The Journal of philosophy*, v. 51, 1954, 719–30).

[64] There are cogent reasons for thinking event ontology is inconsistent with an Aristotelian metaphysics of the sort Scotus holds. Since events on most accounts include times, and causation is spelled out for the most part only in terms of a relation between events, event ontology seems to leave no room for the Aristotelian doctrine that time is just the measure of motion. Given that every motion has a cause, on event ontology, such an explanation of what time is would be circular. Moreover, event ontology is inconsistent with Scotus' theist metaphysics, as event ontology rules out *a priori* the possibility of creation as a causal activity of God. For God as an agent does not create at a time. An event ontology seems to rule out an Aristotelian account of time and a theistic doctrine of creation without an argument. From Scotus' point of view at least, it is preferable not to build these results into an ontology and an account of causation from the start.

[65] Witt, *Substance and Essence in Aristotle* (Cornell University Press: Ithaca, 1989), pp. 3, 55.

[66] Note that whereas they identify the substantial form and the essence, Scotus distinguishes them with what he calls a *formal distinction.* For Loux, Lewis, and Wedin, the substantial form is pure, or at least it is not a composition of an item in act and an item in potency . . . See Michael Loux, *Primary Ousia* (Ithaca: Cornell University Press, 1991); Frank Lewis*, Substance and Predication in Aristotle* (New York : Cambridge University press, 1992); and Michael Wedin, *Aristotle's Theory of Substance* (New York : Oxford University Press, 2000).

But for Scotus, the individual substantial form is composed of an item in act, what he calls the haecceity, and an item in potency, the common nature. The common nature is "contracted" by the haecceity, resulting in an individual substantial form. Something contracts another just when it makes the other, which was not individual in itself, be individual. Finally, for Scotus, no part of a substance is an actual universal: certainly not the substantial form, but not the essence either.

[67] Prime matter is a proper part of the proximate matter, but not immediately. In a more regimented manner: prime matter is a proper part of something, x1, x1 is a proper part of something, x2, . . . , xn is a proper part of the proximate matter. Moreover, the "part of" relations represented by the solid lines

express different proper part relations as if they were all the same. Proximate matter and substantial form are each parts of the material substance in a different sense from that in which the common nature and haecceity are parts of the substantial form.

[68] One may wonder why (H) follows from (G); to answer such inquiries, I offer a paraphrase of a more formal "tree" derivation of (H) from (G) that may be readily accessible. I omit mention of "Rpf" for clarity; including it would make no significant difference to the validity of the derivation:

1.	{~<>[]Rpj & ~<>[]Rpa }@ world w1	This is a premise.
2.	{~<>~ (Rpj & Rpa)} @w1	Assumption solely for the sake of argument
3.	{[] (Rpj & Rpa)} @w1	From (2)
4.	{~<>[]Rpj} @w1	From (1)
5.	{[]~[]Rpj} @w1	From (4)
6.	{~[]Rpj} @w1	From (5), by reflexivity—committing the paraphrase to modal system T
7.	{<>~Rpj} @w1	From (6)
8.	{~Rpj} @w2	From (7)
9.	{(Rpj & Rpa)} @w2	From (3)
10.	{Rpj} @w2	From (9)

Note the explicit contradiction, {Rpj & ~Rpj} @w2, from (8) and (10). Line (6) is crucial in the sense that it commits me to T, but T is relatively weak among normal modal systems. Its use does not seem to be an unreasonable liability, as it commits me to the T axiom (e.g. []X → X) and the reflexivity of the relevance relation between worlds, both of which seem *prima facie* intuitive.

Chapter 3

[1] The point is made in the Lect. II.3.1.1.30: Tunc dico, secundum Avicennam V *Metaphysicae* suae, quod "equinitas est tantum equinitas, et non est de se nec una nec multa nec universale nec singulare." (Therefore, I say, in accord with Avicenna in his *Metaphysics*. V, that "equinity is only equinity, and is not from itself either one or many, either universal or particular.") Again, in the Rep. Par. II.12.5.11, we find "Modus ponendi est Avicennae 5 Metaphys. Cap. 1. *Equinitas est tantum equinitas*" (The way of putting the matter is Avicenna's in his *Metaphysics* V, chapter 1: Equinity is only equinity).

[2] Tweedale (1993: 79–81)makes a case for Alexander of Aphrodisias being the forefather of the intuition behind common natures. It was Alexander who advocated the thesis of *accidentality*, according to which being universal and being particular are each only accidental to natures. Avicenna, Aquinas, and Scotus each accept and use that thesis.

[3] On Avicenna's reasoning, see Spade's lecture on Avicenna's common natures ch. 57: "Each common nature has an integrity of its own, as a kind of metaphysical block—and that is what we call its *lesser being*. It has some ontological

status . . . it is not absolutely nothing by itself, even though all by itself it doesn't exist." (http://pvspade.com/Logic/docs/The%20Course%20in%20the%20Box%20Version%202_0.pdf) Last accessed December 20, 2009.

[4] See also Owens, Joseph., "Common Nature: A Point of Comparison Between Thomistic and Scotistic Metaphysics." *Mediaeval Studies*, v. 19, 1957: 1–14: "The denial of unity in the nature as such is unqualified in Avicenna. It is not restricted [as is the case with Scotus—TPB] to one kind of unity, individual unity, at least expressly."

[5] I say a substantial nature is a *proper* constituent only to stress that it must go together with some other item in order to constitute a substantial form. I use "constituent" rather than "part" to sidestep a debate about the propriety of adopting some form of mereological system to talk about medieval opinions on the relations of wholes and their constituents.

[6] I take the terminology *forma partialis,* etc. from Scotus' Lib III.2.2.

[7] II.3.1.1.2.

[8] One possible alternative interpretation—that Scotus means that the nature "human" is individual in whatever it belongs to, but not necessarily the *same* individual—is not absurd, and would undercut Scotus' clear argumentative intent to run a reductio of his opponent's assumption. Thus we should not adopt it.

[9] I shall have to say more about this "necessity" attaching to *propria.* In particular, I argue that a thing can necessarily have a power that it never fully actualizes. For contracted natures, community is like that, namely a power the contracted nature necessarily has, but which through no defect of its own it never fully actualizes.

[10] Scotus Op. oxon. II d3 q1 n27, trans. Spade (1994).

[11] Op Ox. II.3.1.1.18, trans. Spade.

[12] Ibid.

[13] Ibid.

[14] Scotus, *Ord. II d3 q6 n160,* trans. Spade (1994).

[15] Ibid.

[16] Ibid.

[17] Note that the variety of Platonism Scotus describes is close to the extreme realist position Abelard criticizes, according to which ". . . the same whole is *at the same time* in diverse things, of which it constitutes the substance materially. Although *in itself* it is universal, the same whole is singular through *advening forms*" ("Glosses on Porphyry," *n27,* trans. Spade, 1994). The extreme realist position differs, in failing to emphasize the separate existence of the universal.

[18] *Ord. II d3 q1 n34,* trans. Spade (1994), italics mine.

[19] I suggest being indifferent implies a threefold lack on the part of the entity proper to a nature. First, the nature's proper entity lacks anything that would make contraction in a precise singular essential to it. Second, its proper entity lacks anything incompatible with contraction in a precise singular. Third, its proper entity lacks anything incompatible with being intelligible. This is not to say the nature has no proper operation following on its entity, but rather

that whatever that operation is, this threefold lack follows necessarily from that proper operation.

[20] King, in "Duns Scotus on the Common Nature and the Individual Difference," *Philosophical Topics*, v. 20, n. 2, 1992, p. 51.

[21] Gill, *Aristotle on Substance* (Princeton: Princeton University Press, 1989).

[22] Ibid., p. 4; the italics are mine.

[23] For instance, King confesses "Contrary to many commentators, I do not think this [the thesis implying that the common nature and haecceity are formally distinct] tells us very much." ("Duns Scotus on the Common Nature," p. 60). Similarly, Moreland writes, "Suarez summarizes the medieval discussion of Scotus' formal distinction , correctly in my view, as being somewhat confused and hard to understand" (*Universals*, McGill-Queen's University Press: 2001, p. 60).

[24] Adams claims Scotus did not seem to settle on a single version of the formal distinction. Adams holds that "Scotus' works contain at least two, importantly different accounts of this alternative sort of non-identity or distinction [sc. formal distinction]" ("Ockham on Identity and Distinction," *Franciscan Studies*, v. 36, 1976, p. 25). The first is roughly the theory of formal distinction I attribute to Scotus, according to which one and the same thing may have distinct property bearers outside of any intellectual act. On the second account, Adams claims Scotus "denies that this [sc. a distinction 'in reality' and 'prior to any act of the intellect'] involves distinguishing a plurality of entities or property bearers within what is really the same thing." ("Universals in the Early Fourteenth Century," in *The Cambridge History of later medieval Philosophy*, ed. Kretzmann et al., (Cambridge: Cambridge University Press, 1982), p. 416). Rather, on the second version, if *x* and *y* are formally distinct, we do not distinguish them as different property bearers, since "[I]t is their mode of non-identity that is diminished or reduced," (Adams, "Ockham on Identity and Distinction," p. 39) apparently "diminished" to the point where the non-identical items in question are not sufficiently distinguished to bear different properties.

Leaving the problem of interpreting the alleged second version aside, I disagree with Adams' claim that there are two versions of the formal distinction in Scotus. Rather, I hold that what Adams sees as different versions of the distinction are not in fact different versions, but rather instances where Scotus emphasizes different aspects of one and the same theory of formal distinction. Adams' description of the "early" theory, on which formally distinct realities are different property bearers in the same thing, is incomplete. True, each reality *of itself* is a distinct property bearer. For instance, humanity of itself has community, and a haecceity has singularity. But realities *actually composed* together in one and the same thing are not distinct property bearers. The humanity of Socrates is contracted, and does not have community. Rather, it actually has the unity of the whole to which it belongs, namely, the singular unity of Socrates.

[25] Scotus, *Ord. I d2 q7 n45* (Vives VIII, 1964).

[26] Ockham, *Ord. II d2 q6*, trans. Spade (1994).

[27] Ibid.

[28] Ibid.

[29] Indeed, Scotus assumes that actual singularity and actual community are incompatible in the major premise of his second argument. See p. 8 of section I above.

[30] Scotus, *Ord. II d3 q6 n189*, trans. Spade (1994).

[31] Ibid., *n179.*

[32] Ibid., *n188.*

[33] Scotus, *Rep. Par. I d36 q4 n9* (Vives XXII, 1964).

Chapter 4

[1] Indeed, we shall see "peculiar" is the right word. Many contemporary philosophers (Gill, Mary Louise, "Individuals and Individuation in Aristotle," in *Unity, Identity and Explanation in Aristotle's Metaphysics*, eds T. Scaltsas, D. Charles, and M.L. Gill (Oxford: Oxford University Press, 1994), Whiting, Jennifer, "Form and Individuation in Aristotle," *History of Philosophy Quarterly*, v. 3, 1986: 359–77, Furth, Montgomery, "Transtemporal Stability in Aristotelean Substances," *Journal of Philosophy*, v. 75, 1978: 624–46, Charlton "Aristotle and the Principle of Individuation," *Phronesis*, v. 17, 1972: 239–49; Lloyd , "Aristotle's Principle of Individuation," *Mind*, v. 79, 1970: 519–29; Anscombe, ""Symposium: The Principle of Individuation," 1953) interpreting Aristotle see the problem of individuation as one of distinguishing between two things of the same lowest species. That is not Scotus' problem of individuation.

[2] Scotus, Ord. II.3.1.1.42, trans. Spade.

[3] See Henry of Ghent's *Quodlibet* V q. 8, *Summae* a. 39, q. 3; q. 4, ad 5; a. 53, q. 3.

[4] Scotus Ord. II.3.1.2.44.

[5] Scotus, Ord. II.3.1.2.45. I have added the bracketed letters.

[6] See Gracia, Jorge J.E., *Individuality: An Essay on the Foundations of Metaphysics* (Albany: State University of New York, 1988), pp. 9–13 and ch. 1 on the intension of "individual"; on principles of individuation pp. 16–21 and ch. 4.

[7] Ord. II.3.1.2.55, my italics.

[8] Scotus, Ord. II.3.1.2.56.

[9] Ibid., *q2 n56.*

[10] Ibid.

[11] Scotus, Ord. II.3.1.2.49.

[12] Scotus, Ord. II.3.1.2.50.

[13] Ibid.

[14] Ibid.

[15] Scotus, Ord. II.3.1.2.51.

[16] Scotus, Ord. II.3.1.2.53.

[17] This move would set Scotus apart from many modern commentators on Aristotle who see a break between the doctrine of the *Categories* and that of the *Metaphysics*. They would hesitate to identify the secondary substances of the *Categories* with the substantial natures of the *Metaphysics*: Aristotle, *pace* Scotus, is said to be talking about different things: the natures of the *Metaphysics* come

to play the role of primary substance. But for Scotus, apparently, the works of Aristotle are unified.

[18] Scotus, Ord. II.3.1.2.57.

[19] Aristotle, 1039a4–7 from Jonathan Barnes, ed. *The Complete Works of Aristotle,* vol. 2 (Princeton: Princeton University Press, 1984).

[20] Quine, "On What There Is," in Mellor and Oliver *supra.*

[21] See Mellor and Oliver *supra,* p. 75.

[22] Ibid., p. 76.

[23] Ibid.

[24] Scotus, Ord. II.3.1.3.62.

[25] Scotus, Ord. II.3.1.3.61.

[26] Porphyry *Isagoge* 23, trans. Spade.

[27] Boethius, *De Trin.* 1.24–31, trans. Spade.

[28] But note his following remark, "For one and the same formula applies to many things, e.g. the formula of man; but Socrates is one" (1074a34–5). This seems to belong rather with texts [4] and [5], illustrating Aristotle considering matter as a cause of a thing's individuality. The proximity of this text with [3] is confirmatory evidence for Gill's thesis, that Aristotle himself did not sharply distinguish principles of individuation and diversity: evidently he has matter in both roles.

[29] Thus, I think Anscombe ("Symposium: The Principle of Individuation", p. 93) is wrong to see Aristotle's principle of individuation only as that which answers "What, then, is the difference between two individuals of the same kind?"

[30] Regis, "Aristotle's 'Principle of Individuation,'" *Phronesis,* v. 21, 1976:157–66, 157.

[31] Regis, p. 158.

[32] Regis, p. 162.

[33] Charlton, "Aristotle and the Principle of Individuation," *Phronesis,* v. 17, 1972: 239–49, p. 246.

[34] Lloyd, "Aristotle's Principle of Individuation," *Mind,* v. 79, 1970: 519–29, p. 524.

[35] Scotus, Ord. II.3.1.5.201.

[36] Scotus, ibid., *q4 n99.*

[37] Ibid., q6, n. 170. For "individual entity," see nn. 177, 181, 183–4.

[38] My discussion is informed by Gracia (1988), *Individuality,* especially chs 1–3.

[39] Gracia, 18; his italics.

[40] Furth (1978, pp. 633–4).

[41] Ibid.

[42] I work here from Gracia's discussion in his *Individuation in Scholasticism: The Later Middle Ages & The Counter Reformation 1150–1600* (Albany: State University of New York, 1994), pp. 230–1. Henceforth Gracia II.

[43] Gracia II, p. 238.

[44] Ibid., pp. 239–40.

[45] Lloyd (1970, p. 519).

[46] Regis (p. 157) takes the problem of individuation to be one of answering the question "What in the nature of specifically identical individuals makes them numerically different?" Regis (p. 158) departs from Lloyd in detail by taking "to individuate" "to mean 'to give uniqueness or singularity to (=make different

from everything else)'." Nonetheless Regis makes a thing's individuality relational. But if there were nothing else of a lowest species for a thing of that species to be different from, would that thing still be an individual? Regis says nothing in reply. Gill (1994, p. 57) sees the problem of individuation to be one of explaining "how is one such [Aristotelian substantial] particular distinguished from others, which may be qualitatively indistinguishable?" She claims (p. 58) an "account of particularity" "aims to explain why one object, which may be qualitatively indistinguishable from another, is none the less distinct."

[47] Charlton (1972, p. 239).

[48] Furth (1978, p. 643).

[49] Ibid., p. 644.

[50] Whiting (1986, p. 359).

[51] I quote from the edition of Aristotle's *Complete Works Vol. I*, translated by Barnes (1984).

[52] Gill, "Individuals and Individuation," p. 58, my italics.

[53] Note that Gill explicitly intends her dilemma against the problem of individuation to extend beyond consideration of Aristotle; that is, she is not making a merely historical point.

[54] Gill (1994, p. 59).

[55] Ibid., p. 59).

[56] Adams "Primitive Identity and Primitive Thisness," in Kim and Sosa *supra*, pp. 172–83.

[57] Ibid., p. 172.

[58] Ibid., p. 173.

[59] GAS. Rosenkrantz, *Haecceity: An Ontological Essay* (Springer: 1993), p. 3.

[60] Ibid., p. 1.

[61] He writes "a haecceity is one thing, and the reflexive relation of identity is quite another" (ibid., p. 8).

[62] Ibid., pp. 4, 6.

[63] Ibid., pp. 84–5; he rejects these as conceptions of a principle of individuation alternative to his own. By implication, I infer that he would say haecceities are neither substrata nor parts.

[64] Ibid., p. 75.

[65] Ibid., fn #2; alas, he refers only to the Hyman and Walsh abridged translation. On p. 87, he refers to his principle of individuation as "a *haecceity criterion*, often attributed to Duns Scotus." If he takes that claim seriously, he is mistaken. I discuss this below.

[66] Ibid., p. 75.

[67] See Gracia (1988) for elaboration on the point at length, especially in chs 1, 4, and 5.

[68] Castaneda, "Individuation and Non-identity," *APT* v. 12, n. 2, 1975: 135.

[69] Rosenkrantz, p. 87.

[70] Richard Swinburne, "Thisness," *Australasian Journal of Philosophy*, v. 73, n. 3, 1995, pp. 389–400.

[71] Ibid., p. 389.

[72] Ibid., p. 396.

[73] Ibid., p. 390.

[74] Ibid., p. 390.

[75] Ibid., p. 391.

[76] Ibid., p. 391.

[77] Ibid., p. 391.

[78] I am tacitly assuming that any way the actual world could have been is a possible world relevant to the actual world. A possible world irrelevant to the actual one is not a way the actual world could have been. Thus, the possible worlds that are the ways the actual world could have been are each accessible to the actual world for purposes of evaluating the truth of modal discourse.

[79] Kaplan, p. 217.

[80] See Kaplan, pp. 216–17. His *Anti-haecceitism* is also unattractive: "for entities of distinct possible worlds there is no notion of transworld being." No items in different possible worlds may be the same individual; they must be different. Kaplan says "there is no metaphysical reality of sameness or difference which underlies the clothes." How are we to use possible world semantics to settle questions about the truth of modal discourse? Kaplan: "Our interests may cause us to identify individuals of distinct worlds, but then we are creating something—a transworld continuant." We could flesh out Kaplan's suggestion with a version of Lewis' Counterpart Theory; on it, the counterpart relation is sensitive to our interests. To me, that sensitivity of the counterpart relation drains it of interest. I am here signaling disagreement with David Lewis' Counterpart Theory, which accepts Kaplan's Anti-haecceitism as a premise.

[81] Essences function as parts, not properties, and together with an essence, a haecceity makes a third thing, a substantial form.

[82] See Allaire, "Bare Particulars," *Philosophical Studies*, v. 14, 1963: 1–8, and "Another Look at Bare Particulars," *Philosophical Studies*, v. 16, 1965: 16–21.

[83] Note that Allaire's problem of individuation is not Scotus': Allaire is not trying to explain merely how the individuality of a thing is possible.

[84] To paraphrase W.J. Loux, *Substance and Attribute: A Study in Ontology* (Springer, 1978), p. 140. He calls this the "Principle of Constituent Identity."

[85] Sellars, "Particulars," *Philosophy of Science*, 1952.

[86] W.J. Loux (1978: 147) endorses Sellars' criticism, writing "Sellars is right in claiming that the notion of a bare particular is implicitly contradictory."

[87] Loux, "Kinds and the Dilemma of Individuation," *Review of Metaphysics.*

[88] Loux (1978: 147).

[89] Note that to show a property is *essential* to a haecceity, *pace* such contemporary self-styled expositors of Aristotelian essentialism like Copi and Marcus, one should do more than show merely that it is *necessary*. Even a necessary property might only be a *proprium* rather than part of an essence. If it were merely a proprium, it would still make an accidental whole with the haecceity, even though it is necessary to it. Loux (1978) says nothing to establish that the property of having no characteristics is essential to, rather than merely proper to, a bare particular. There, he seems to assume with Copi and Marcus roughly that if the non-trivial, non-universally possessed property is necessary to a thing, it is essential to it.

Chapter 5

[1] Richard Cross, *The Physics of Duns Scotus* (New York: Oxford University Press, 1998), p. 93: "Scotus defends an account of material substance according to which no such substance is simply reducible to the sum of its parts," and p. 86: "Scotus claims that a whole composite substance is an absolute entity really distinct from all its parts."

[2] Lynne Rudder Baker, "On Making Things Up: Constitution and Its Critics," *Philosophical Topics*, v. 30, no. 2, Spring 2002, p. 44.

[3] Ibid., p. 45.

[4] Ibid.

[5] Ibid.

[6] Aristotle, *Metaphysics* VII.17 1041b12–18, tr. by Terence Irwin and Gail Fine (Indianapolis: Hackett Publishing, 1995).

[7] D.M. Armstrong, "Universals and particulars," in *A Companion to Metaphysics,* eds Jaegwon Kim and Ernest Sosa (Cambridge: Blackwell Publishers, 1995), pp. 506–7. Earlier, in "Universals" (Ibid., pp. 505–6), Armstrong put the general issue this way, saying "Admission of universals raises the question exactly how they stand to the particulars that instantiate them . . . Are particulars in some degree or other distinct from universals but particularly and intimately linked to them by some special tie?"

[8] Armstrong in "Universals and Particulars," ibid., p. 507.

[9] Ibid, p. 91.

[10] Ibid, p. 92.

[11] Duns Scotus, *Questions on the Metaphysics of Aristotle*, eds Girard J. Etzkorn and Alan B. Wolter, OFM (St. Bonaventure: The Franciscan Institute, 1998), Book VIII, Qu. 4, n. 54. Again, for example, at n12: ". . . so a composite of matter and form is one in its way. Neither is there any reason why this is so except 'because this is matter and this is form;' . . ."

[12] The Chalcedonian formula says:

> Following therefore the holy fathers, we confess one and the same our Lord Jesus Christ, and we all teach harmoniously [that he is] the same perfect in godhead, the same perfect in manhood, truly God and truly man, the same of a reasonable soul and body; homoouisios with the Father in godhead, and the same homoousios with us in manhood, like us in all things except sin; begotten before the ages of the Father in godhead; the same in the last days for us and for our salvation [born] of Mary the Virgin Theotokos in manhood, one and the same Christ, Son, Lord, unique; acknowledged in two natures without confusion, without change, without division, without separation—the difference of the natures beign by no means taken away because of the union, but rather the distinctive character of each nature being preserved, and [each] combining in one person and hypostasis—not divided or separated into two persons, but one and the same Son and only –begotten God, Logo, Lord Jesus Christ, taken from Jaroslav Pelikan, *The Christian Tradition: The Emergence of the Catholic Tradition (100-600),* vol. I (University of Chicago Press, 1971), pp. 264–5.

[13] Scotus (1975), 19.4, p. 419.

[14] Scotus, Ord. III.1.1.n9. He writes, “But one should distinguish between actual dependence, potential, and aptitudinal [dependence] . . .”

[15] Ibid.

[16] Scotus, Ord. III.1.1.11.

[17] Ibid, n. 9.

[18] Alston, William P., “Substance and Trinity,” in *The Trinity*, eds Stephen T. Davis, Daniel Kendall, and Gerard O’Collins (Oxford: Oxford University Press, 1999), pp. 179–202.

[19] ibid., p. 180.

[20] ibid., p. 179.

[21] See ibid., pp. 181–2.

[22] Aristotle, *Cat.*5 (2a 11–12).

[23] Alston (1999), p. 185.

[24] ibid., p. 185.

[25] ibid., p. 187.

[26] ibid., p. 190.

[27] Thomas Morris, *The Logic of God Incarnate* (Ithaca: Cornell University Publishers, 1986).

[28] Eleanore Stump, “Aquinas’ Metaphysics of the Incarnation,” in *The Incarnation*, ed. Stephen T. Davis, Daniel Kendall, and Gerard O’Collins (Oxford: Oxford University Press, 2002), pp. 197–220.

[29] ibid., p. 207.

[30] ibid.

[31] ibid.

[32] Stump (2002), p. 201.

[33] ibid.

[34] As we saw in discussing the divine nature of the Trinity in 3.1,

[35] Eleonore Stump, *Aquinas* (New York: Routledge, 2003), p. 408.

Bibliography

Primary Sources

Aquinas, St. Thomas, *Summa Contre Gentiles Part III,* trans. Charles J. O'Neil (Notre Dame : Notre Dame University Press, 1989).

—, *Summa Contre Gentiles Part I,* trans. Anton Pegis (Notre Dame : Notre Dame University Press, 1991).

—, *Summa Contre Gentiles Part II,* trans. Vernon J. Bourke (Notre Dame: Notre Dame University Press, 1991).

—, *On the Principles of Nature 2,* trans. McInerny (New York: Penguin Books, 1998).

Aristotle, *Complete Works Vol. I,* trans. J. Barnes (Princeton: Princeton University Press, 1974).

—, *Categories & De Interpretatione,* trans. J.L. Ackrill (Cambridge: Oxford University Press, 1975).

—, *Physics: Books 1 & 2,* trans.. William Charlton (Oxford: Oxford University Press, 1983).

—, *Complete Works Vol. II,* trans. J. Barnes (Princeton: Princeton University Press, 1984).

—, *Metaphysics Books Z & H,* trans. David Bostock (New York: Oxford University Press US, 1994).

—, *Physics,* trans. Waterfield (Oxford: Oxford University Press, 1996).

Boethius, *De Trinitate,* trans. Spade in *Five Texts on the Medieval Problem of Universals* (Indianapolis: Hackett Publishing, 1994).

Cyril of Alexandria, Saint, *On the Unity of Christ,* trans. John Anthony McGuckin (Crestwood: St. Vladimir's Seminary Press, 2000).

Ghent, Henry of, *Quodolibitel Questions on Free Will,* trans. Roland J. Teske (Milwaukee: Marquette University Press, 1993).

Lombard, Peter, *Sententiae in IV libris distinctae,* ed. I. Brady (Grottaferrata/Romae: Collegii S. Bonaventurae ad Claras Aquas, tom. I 1971, tom. II 1981).

Ockham, William, *Predestination, God's Foreknowlege, and Future Contingents,* trans. Marilyn McCord Adams and Norman Kretzmann (Indianapolis: Hacket Publishing Corp., 1983).

Porphyry, *Isagoge,* trans. Spade

Scotus, Duns, *Opera Omnia,* ed. Wadding-Vivès, 22 vols (Paris, 1891–5).

—, *Opera Omnia,* (Civitas Vaticana: Typis Polyglottis Vaticanis, 1950–)

—, *De Prima Principio,* (St. Bonaventure: Franciscan Institute Publications, 1966).

—, *Opera Omnia* (Georg Olms Verlagsbuchhandlung: Hildesheim, 1968).

—, *A Treatise on God as First Principle:A Latin Text and English Translation for the De Primo Principio,* ed. 2, revised with commentary/trans. Allan Wolter O. F. M. (Chicago: Franciscan Herald Press, 1983).

—, *Philosophical Writings*, trans. Allan Wolter O. F. M (Indianapolis: Hackett Publishing Corp., 1987).

—, *Early Oxford Lecture on Individuation* (Santa Barbara: Old Mission Santa Barbara, 1992).

—, selections in *Five Texts on the Medieval Problem of Universals*, trans. Paul Spade (Indianapolis: Hackett Publishing, 1994).

—, *On the Will & Morality*, trans. Allan B. Wolter, O. F. M., ed. William A. Frank (Washington, DC: Catholic University of America, 1997).

—, *Scotus vs. Ockham: A Medieval Dispute over Universals*, trans. and ed. Martin Tweedale (Lewiston: Edwin Mellon Press, 1999).

Suarez, Francisco, *On Individuation*, trans. Jorge J. E. Gracia (Milwaukee: Marquette University Press: 1982).

—, *On Efficient Causality: Metaphysical Disputations 17, 18, 19*, trans. Alfred J. Freddoso (New Haven: Yale University Press, 1994).

Secondary Sources

Adams, Robert, "Ockham on Identity and Distinction," *Franciscan Studies*, v. 36, 1976.

—, "Universals in the Early Fourteenth Century," in *The Cambridge History of Later Medieval Philosophy*, ed. Kretzmann et al. (Cambridge: Cambridge University Press, 1982).

Adams, Robert M., "Primitive Identity & Primitive Thisness," in Kim and Sosa, 1999: 172–83.

Allaire, "Bare Particulars," *Philosophical Studies*, v. 14, 1963: 1–8.

—, "Another Look at Bare Particulars," *Philosophical Studies*, v. 16, 1965: 16–21.

Alluntis, Felix and Wolter, Allan B., *God and Creatures* (Princeton: Princeton University Press, 1975).

Alston, William P., "Ontological Commitments." *Philosophical Studies*, v. 9, 1958: 1–2.

—, "Substance and Trinity," in *The Trinity*, eds Stephen T. Davis, Daniel Kendall, and Gerard O'Collins (Oxford: Oxford University Press, 2002), pp. 179–202.

Anscombe, G.E.M., "Symposium: The Principle of Individuation." *Aristotleian Society Supplement*, v. 27, 1953: 83–96.

Armstrong, David, *A Theory of Universals* (Cambridge: Cambridge University Press, 1978).

—, *Universals* (Boulder: Westview Press, 1989).

—, "Against 'Ostrich Nominalism'" in *Properties*, eds Mellor and Oliver (Oxford: Oxford University Press, 1994): 101–11.

—, "Properties," in Mellor and Oliver, 1994.

—, *Dispositions: A Debate*, (New York: Routledge, 1996).

—, "Universals as Attributes," in Kim and Sosa, 1999: 198–208.

Bates, Todd, and Ross, James F., "Duns Scotus on Natural Theology," in *The Cambridge Companion to Duns Scotus*, ed. Thomas Williams (Cambridge: Cambridge University Press, 2002): 238–62.

Butcharov, Panyot, *Resemblance and Identity* (Bloomington: Indiana University Press, 1966).

Castaneda, "Individuation and Non-Identity," *APQ*, v. 12, n. 2, 1975: 131–40.

Charlton, William, "Aristotle and the Principle of Individuation," *Phronesis*, v. 17, 1972: 239–49.

—, translator's commentary in Aristotle, *Physics: Books 1 &2* (Oxford: Oxford University Press, 1983).

—, "Prime Matter: a Rejoinder," *Phronesis*, v. 28, **1983:** 197–211.

Code, Alan, "The Persistence of Aristotelian Matter," *Philosophical Studies*, v. 29, 1976a: 357–67.

—, "Aristotle's Response to Quine's Objections to Modal Logic," *Journal of Philosophical Logic*, v. 5, 1976b: 159–86.

—, "No Universal is a Substance: An Interpretation of Metaphysics Z13, 1038b8-15," *Padeia*, 1978: 65–74..

Copi, Irving, "Essence and Accident," *Journal of Philosophy*, v. 51, 1954: 719–30.

Copleston, F., *A History of Philosophy*, vol. 2 (Westminster: Newman Press, 1950).

Cross, Richard, *The Physics of Duns Scotus* (New York: Oxford University Press, 1998).

—, "Philosophy of Mind," in Williams, 2002: 263–84.

Cross, Richard, *Duns Scotus on God* (Surrey: Ashgate, 2005).

—, *The Metaphysics of the Incarnation: Thomas Aquinas to Duns Scotus* (Oxford: Oxford University Press, 2005).

Davidson, Donald, "Causal Relations," in Kim and Sosa, 1999: 428–35.

Davies, Brian, *The Thought of St. Thomas Aquinas* (New York: Oxford University Press US, 1993).

Davis, Stephen T., Kendall, Daniel, and O'Collins, Gerard (eds.) *Incarnation* (Oxford: Oxford University Press, 2002).

Devitt, Michael, "'Ostrich Nominalism' or 'Mirage Realism?'" in Mellor and Oliver, 1994: 93–100.

Dreyer, Mechthild, and Ingham, Mary Beth, *The Philosophical Vision of John Duns Scotus* (Washington, DC: Catholic University Press, 2004).

Durrant, M., "Essence and Accident," *Mind*, v. 84, 1975: 595–600.

Furth, Montgomery, "Transtemporal Stability in Aristotelean Substances," *Journal of Philosophy*, v. 75, 1978: 624–46.

Gill, Mary Louise, *Aristotle on Substance* (Princeton: Princeton University Press, 1989).

—, "Individuals and Individuation in Aristotle," in *Unity, Identity and Explanation in Aristotle's Metaphysics*, eds T. Scaltsas, D. Charles, and M.L. Gill (Oxford: Oxford University Press, 1994), pp. 55–72.

Gilson, Etienne, *Jean Duns Scot* (Paris: J.Vrin, 1952).

—, *The Christian Philosophy of St. Thomas Aquinas* (Notre Dame: Notre Dame University Press, 1994).

Goodman, Nelson, *Fact, Fiction, and Forecast* (Cambridge: Harvard University Press, 1955).

—, "A World of Individuals," *The Problem of Universals: A Symposium.* (Notre Dame: University of Notre Dame Press, 1956), pp. 13–31.

Gracia, Jorge J.E., *Individuality: An Essay on the Foundations of Metaphysics* (Albany: State University of New York, 1988).

—, *Individuation in Scholasticism: The Later Middle Ages & The Counter Reformation 1150–1600* (Albany: State University of New York, 1994).

Graham, Daniel W., *Aristotle's Two Systems* (Oxford: Oxford University Press, 1988).

Heller, Mark, "Things Change," *Philosophy and Phenomenological Research*, v. 52 (3), 1992: 695–704.

—, "Temporal Parts of Four-Dimensional Objects," in Kim and Sosa, 1999: 312–26.

Ingham, Mary Beth, *The Harmony of Goodness: Morality & Moral Living According to John Duns Scotus* (St. Bonaventure : Franciscan Press, 1996).

Jones, Barrington, “Aristotle’s Instruction of Matter,” *Philosophical Review*, v. 83, 1974: 474–500.

Jubien, Michael, *Ontology, Modality, and the Fallacy of Reference* (Cambridge: Cambridge University Press, 1993).

Kaplan, David, “How to Russell a Frege-Church,” reprinted in *The Possible and the Actual*, ed. Michael J. Loux, (Ithaca: Cornell University Press, 1979), pp. 210–24.

Kenney, Sir Anthony, *Aquinas on Mind*, (New York: Routledge, 1993).

Kim, Jaegwon, “Events as Property Exemplifications,” in *Action Theory*, eds Myles Brand and Douglas Walton (Dordrecht: Reidel, 1975).

Kim, Jaegwon and Sosa, Ernest (eds), *Metaphysics: An Anthology* (New York: Blackwell Publishing, 1999).

King, “Duns Scotus on the Common Nature and the Individual Difference,” *Philosophical Topics*, v. 20, n. 2, 1992: 50–76.

Kung, Joan, “Can Substance be Predicated of Matter?” *Archiv fur Geschichte der Philosophie*, v. 60, 1978: 140–59.

Lear, Jonathan, *Aristotle: The Desire to Understand* (Cambridge: Cambridge University Press, 1988).

Lesher, James, “Aristotle on Form, Substance and Universals: A Dilemma,” *Phronesis*, v. 16, 1971: 169–78.

Lewis, David, “Postscript B to ‘Survival and Identity’,” in *Philosophical Papers Volume I* (Oxford: Oxford University Press, 1983), pp. 76–7.

—, “Events,” in *Philosophical Papers, Volume II* (Oxford: Oxford University Press, 1986), pp. 241–70.

—, *On the Plurality of Worlds* (New York: Blackwell, 1986).

—, “New Work for a Theory of Universals,” in Mellor and Oliver, 1994: 188–222, pp. 194–5.

—, “Causation,” in Kim and Sosa, 1999: 436–43.

Lewis, Frank, *Substance and Predication in Aristotle* (New York: Cambridge University Press, 1991).

Lloyd, “Aristotle’s Principle of Individuation,” *Mind*, v. 79, 1970: 519–29.

Loux, Michael, “Kinds and the Dilemma of Individuation,” *The Review of Metaphysics*, v. 27, n. 4, 1974: 773–84.

—, *Primary Ousia* (Ithaca: Cornell University Press, 1991).

—, *Metaphysics* (New York: Routledge, 1998).

Loux, W. J., *Substance and Attribute: A Study in Ontology* (New York: Springer, 1978).

Marcus, Ruth, “Essential Attribution,” *The Journal of the History of Philosophy*, v. 68, 1971: 187–202.

Mellor, D. H., “Properties and Predicates,” in Mellor and Oliver, 1994: 255–67.

Moreland, J. P., *Universals* (Montreal: McGill-Queen’s University Press, 2001).

Morris, Thomas, *The Logic of God Incarnate* (Ithaca: Cornell University Press, 1986).

Nasr, Seyyed Hossein, *Islamic Philosophy from its Origin to the Present* (Albany: State University of New York Press, 2006).

Noone, Timothy, B., “Individuation in Scotus,” *American Catholic Philosophical Quarterly*, v. 69, 1995: 527–42.

—, “Universals and Individuation,” in Williams, 2002: 100–28.

Owen, G. E. L., “A Proof in the *Peri Ideon*,” *Journal of Hellenic Studies*, v. 77, 1957: 103–11.

Owens, Joseph., "Common Nature: A Point of Comparison Between Thomistic and Scotistic Metaphysics," *Mideaeval Studies*, v. 19, 1957: 1–14.

Pasnau, Robert, *Theories of Cognition in the later Middle Ages* (Cambridge: Cambridge University Press, 1997).

—, *Thomas Aquinas on Human Nature* (Cambridge: Cambridge University Press, 2001).

Pelikan, Jaroslav, *The Christian Tradition: The Emergence of the Catholic Tradition (100–600)*, vol. I (Chicago: University of Chicago Press, 1971).

Price, H. H., *Thinking and Experience* (London: Hutchinson's University Library, 1953).

Putnam, Hilary, "Pragmatic Realism," in Kim and Sosa, 1999: 591–606.

Quine, W. V. O., "Identity, Ostension, and Hypostasis," reprinted in *Metaphysics*, 1st Edition, ed. Michael Loux and Dean Zimmerman (New York: Wiley Blackwell, 1953).

—, *Word and Object* (New York: John Wiley and Sons, 1960).

—, "On What There Is" in Mellor and Oliver *supra* (1997).

—, "Natural Kinds," in Kim and Sosa, 1999.

Regis, E. "Aristotle's 'Principle of Individuation'," *Phronesis*, v. 21, 1976: 157–66.

Robinson, H. M., "Prime Matter in Aristotle," *Phronesis*, v. 19, 1974: 168–88.

Rosenkrantz, G. S., *Haecceity: An Ontological Essay* (New York: Springer, 1993).

Scaltsas, Theodore, *Substances & Universals in Aristotle's Metaphysics* (Ithaca: Cornell University Press, 1994).

Sellars, Wilfred, "Particulars," *Philosophy Phenomenological Research*, v. 13, n. 2, 1952: 184–99.

Sellers, R. V., *The Council of Chalcedon: A Historical and Doctrinal Survey* (London: SPCK, 1961).

Shoemaker, Sydney, "Causality and Properties," in Mellor and Oliver, 1994.

Stahl, Donald E., "Stripped Away: Some Contemporary Obscurities Surrounding *Metaphysics* Zeta," *Phronesis*, v. 26, 1981: 177–80.

Stump, Eleanore, "Aquinas' Metaphysics of the Incarnation," in Stephen T. Davis, Daniel Kendall, and Gerard O'Collins, 2002: 197–220.

—, *Aquinas* (London: Taylor and Francis, 2005).

Swinburne, Richard, "Thisness," *Australian Journal of Philosophy*, v.73, n.3, 1995: 389–400.

Thomson, Judith Jarvis, "Parthood & Identity across Time," in Kim and Sosa, 1999: 301–11.

Tweedale, Martin, "Duns Scotus' Doctrine on Universals & the Aphrodesian Tradition," *American Catholic Philosophical Quarterly*, v. 67, 1993: 77–93.

Wedin, Michael, *Aristotle's Theory of Substance* (New York: Oxford University Press, 2000).

Whiting, Jennifer, "Form and Individuation in Aristotle," *History of Philosophy Quarterly*, v. 3, 1986: 359–77.

Williams, Bernard, "Hylomorphism," in *Oxford Studies in Ancient Philosophy*, vol. 4, eds Julia Annas and Michael Woods (Oxford: Oxford University Press, 1986), pp. 189–99.

Williams, Thomas (ed.), *The Cambridge Companion to Duns Scotus* (Cambridge: Cambridge University Press, 2002).

Witt, Charlotte, *Substance and Essence in Aristotle* (Ithaca: Cornell University Press, 1989).

Index

Abelard 152
Adams, Marilyn M. 153
Adams, Robert M. 118–19, 156
Allaire, Edwin 157
Alston, W.P. 9, 138–40, 144, 145, 159
Aquinas, St. Thomas 148
  common natures 59–60
  prime matter 33–4
Aristotle 129
  individuation 99ff, 111
  prime matter 29–31
  problem of change 29–30
  substantial forms 35–9
  substratum solution to problem of change 30–3
Armstrong, David M. 30–3, 130, 145, 158
Avicenna (Ibn Sina) 59–60, 151

Baker, Lynne R. 127–8, 158
being and having 57–8
Boethius 98–9, 155

Castaneda, Hector-Neri 120, 156
Charlton, William 101–4, 110–11, 147, 155, 156
Code, Alan 147
common natures 10–12, 22
  arguments for 64–72
  being and unity of 59–61
  Ockham's Problem 81–5
  and Platonic Forms 77–81
constitutive ontology 12–14
Copi, Irving 145, 157
Cross, Richard 49–50, 131

Davidson, Donald 144
Devitt, Michael 144

event ontology 12–14

four dimensionalism, doctrine 24–7
  argument for 27–30
Frege, Gottlob 16–17
Furth, Montgomery 111, 154, 156

Gill, Mary L. 112–14, 154, 155, 156
Goldstein, Laurence 1
Goodman, Nelson 144, 146
Gracia, Jorge 110, 154, 155, 156
Graham, Daniel 148

Heller, Mark 25, 146, 147
Henry of Ghent 88–95, 154, 155

idion argument 18–19, 61–2
individuation, accidents 98–9
  existence 95–8
  matter 99–104
  negations 88–95
  Scotus' problem of 86–8
  Scotus' solution 104–12

Jubien, Michael 147

Kaplan, David 119–22, 157
Kenny, Anthony 36, 148
Kim, Jaegwon 13, 145
King, Peter 81–5, 153
Kung, Joan 146

Lear, Jonathan 146
Lewis, David 13, 25–30, 146, 147
Lewis, Frank 16, 112
Loux, Michael 112, 127–9, 144, 146, 147, 150, 157

Mellor, D. H. 10, 13
mereological essentialism 36–7, 128
mereology, classical extensional 7
Moreland, J. P. 1, 4–6, 153
Morris, T.V. 140–1, 159

Ockham 153
Owens, Joseph 146, 152

Plato's Ideas 19–21
Porphyry 155
Porphyry's Tree 97–8
Price, H.H. 144
Putnam, Hilary 1, 144

Quine, W.V.O. 6–9, 96–7, 144, 146

real distinction of matter and form 45
Regis, E. 101–4, 156
Robinson, H.M. 148
Rosenkrantz, Gary 115–17, 156

Sellars, W. 126–7, 157
strong proscription 18
Stump, Eleanore 141–3, 159
substance of a thing 20–1
Swinburne, Richard 117–19, 156

Thomson, Judith Jarvis 26
Tweedale, Martin 151

universals 2–12, 17–21

weak proscription 18
Wedin, Michael 16, 146
Whiting, Jennifer 111, 156
Williams, Bernard 36, 148
Witt, Charlotte 16, 57